DOCUMENT RESUME

ED 119 699 95 IR 003 167

TITLE	The ERIC At Stanford Newsletter, 1969.
INSTITUTION	Stanford Univ., Calif. ERIC Clearinghouse on Information Resources.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C.
PUB DATE	76
CONTRACT	NIE-C-74-0027
NOTE	40p.; Some pages may not reproduce clearly due to type size and quality of original document
EDRS PRICE	MF-$0.83 HC-$2.06 Plus Postage
DESCRIPTORS	Annotated Bibliographies; *Bibliographies; Clearinghouses; Data Bases; *Educational Technology; Instructional Media; *Newsletters; Television
IDENTIFIERS	*Educational Resources Information Center; ERIC

ABSTRACT

The issues from the year 1969 of "Now Available," the newsletter of the Educational Resources Information Center (ERIC) Clearinghouse on Educational Media and Technology, are bound together as one document. The newsletters contain announcements of the Clearinghouse's output published in "Research in Education." Author, title, sources, descriptors, microfiche and hardcopy prices, ED numbers, and (in the later issues) brief annotations are given for each document. There are also short articles and announcements of Clearinghouse, government, and educational association publications and activities. In addition, articles on such topics as ethnic studies, McLuhan and the media, and educational and commercial television are scattered through the issues. (LS)

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THE ERIC AT STANFORD NEWSLETTER

1969

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NOW AVAILABLE, FEB '69

ERIC at Stanford

The Clearinghouse on Educational Media and Technology

Documents Processed By the Clearinghouse

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Though enough information is provided here to allow documents to be ordered, the appropriate issues of *Research in Education* contain detailed resumes, and you may wish to check those first. In addition, *Research in Education* lists the documents input by all the other clearinghouses in the ERIC system, and some of those documents are relevant to educational media and technology.

Explanation of the Entries

ED number—This is the accession number of the document and should be used when ordering from the ERIC Document Reproduction Service.

Price and Pages—The cost of the document in microfiche (MF) and hardcopy (HC) is given, along with its length.

Descriptors—The descriptive terms represent the subject matter of the document.

ED 018 134
Developing Mass Media in Asia, Papers of UNESCO Meeting at Bangkok, January 1960. Reports and Papers on Mass Communication, No. 30. United Nations Educational Scientific and Cult. Org. Pub Date 60, EDRS Price MF $0.50 HC $4.80 118p.
Descriptors: Conferences, Newspapers, Periodicals, Radio, Television.

ED 018 135
Smith, Wendell I., Ed. and Moore, J. William, Ed. *Programmed Learning—Theory and Research, An Enduring Problem in Psychology. Selected Readings.* Pub Date 62, Document Not Available from EDRS.
Descriptors: Instructional Technology, Learning Theories, Programed Instruction, Teaching Machines.

ED 018 136
De Kieffer, R. E. and Cochran, Lee W. *Manual of Audio-Visual Techniques, Second Edition. Prentice-Hall Education Series.* Pub Date 62, Document Not Available from EDRS.
Descriptors: Audiovisual Aids, Teaching Techniques.

ED 018 137
Danielson, Wayne A. and Wilhoit, G. C., Jr. *A Computerized Bibliography of Mass Communication Research, 1944-1964.* Magazine Publishers Association Inc., New York, N.Y. Pub Date Jul 67, Document Not Available from EDRS.
Descriptors: Bibliographies, Communication (Thought Transfer), Mass Media, Media Research, Periodicals.

ED 018 138
Diamond, Robert M., Ed. *A Guide to Instructional Television.* Pub Date 64, Document Not Available from EDRS.
Descriptors: Guides, Instructional Television.

ED 018 139
Spaulding, Seth, Comp. *Programmed Instruction, An International Directory. L'enseignement Programme, Un Repertoire International.* Pittsburgh Univ., Pa., School of Education, United Nations Educational Scientific and Cult. Org. Pub Date 67, Document Not Available from EDRS.
Descriptors: Developing Nations, Directories, Programed Instruction.

ED 018 140
Evans, Richard I. and Leppmann, Peter K. *Resistance to Innovation in Higher Education, A Social Psychological Exploration Focused on Television and the Establishment. The Jossey-Bass Series in Higher Education.* Pub Date 68, Document Not Available from EDRS.
Descriptors: Changing Attitudes, Instructional Innovation, Instructional Television, Research Methodology, Teaching Methods.

ED 018 141
Griffith, Barton L., Ed. and MacLennan, Donald W., Ed. *Improvement of Teaching by Television, Proceedings of the National Conference of the National Association of Educational Broadcasters (University of Missouri, March 2-4, 1964).* Missouri Univ., Columbia. Pub Date 64, Document Not Available from EDRS.
Descriptors: Educational Methods, Electronic Equipment, Instructional Improvement, Instructional Television, Television Research.

ED 018 142
Espich, James E. and Williams, Bill. *Developing Programmed Instructional Materials, A Handbook for Program Writers.* Pub Date 67, Document Not Available from EDRS.
Descriptors: Program Development, Programed Instruction, Programing.

ED 018 143
Mager, Robert F. *Preparing Instructional Objectives.* Pub Date 62, Document Not Available from EDRS.
Descriptors: Behavioral Objectives, Branching, Evaluation Criteria, Programed Instruction.

ED 018 144
Ballou, Hubbard W., Ed. *1966 Supplement to the Guide to Microreproduction Equipment. Third Edition.* National Microfilm Assn., Annapolis, Md. Pub Date 66, Document Not Available from EDRS.
Descriptors: Catalogs, Equipment, Guides, Microfilm, Photography.

ED 018 145
Ballou, Hubbard W., Ed. *Guide to Microreproduction Equipment. Third Edition.* National Microfilm Assn., Annapolis, Md. Pub Date 65, Document Not Available from EDRS.
Descriptors: Equipment, Equipment Manufacturers, Guides, Microfilm, Photography.

ED 018 146
Ballou, Hubbard W., Ed. *1967 Supplement to the Guide to Microreproduction Equipment. Third Edition.* National Microfilm Assn., Annapolis, Md. Pub Date 67, Document Not Available from EDRS.
Descriptors: Catalogs, Equipment, Guides, Microfilm, Photography.

ED 018 147
The Impact of Technology on the Library Building. Educational Facilities Labs. Inc., New York, N.Y. Pub Date Jul 67, EDRS Price MF $0.25 HC $0.56 12p.
Descriptors: Automation, Buildings, Libraries, Planning, Technology.

ED 018 148
Himes, Harold W. *Ser I, Environmental Abstracts. Ser, School Environments Research.* Michigan Univ., Ann Arbor, Educational

Now Available
Number 5

The Clearinghouse is part of the Institute for Communication Research
Stanford University, Stanford, Calif. 94305

Facilities Labs. Inc., New York, N.Y. Pub Date 65, Document Not Available from EDRS.

Descriptors: Annotated Bibliographies, Behavior, Environmental Research, Learning Processes, School Environment.

ED 018 149

Carson, Daniel H. and others. *Ser 2, Environmental Evaluations. Ser. School Environments Research.* Michigan Univ., Ann Arbor. Educational Facilities Labs. Inc., New York, N.Y. Pub Date 65, Document Not Available from EDRS.

Descriptors: Behavior, Environmental Research, Learning Processes, School Environment, Sensory Experience.

ED 018 150

Larson, C. Theodore and others. *Ser 3, Environmental Analysis, Ser. School Environments Research.* Michigan Univ., Ann Arbor, Coll. of Architec. Design. Educational Facilities Labs. Inc., New York, N.Y. Pub Date 65, Document Not Available from EDRS.

Descriptors: Building Design, Environmental Research, Information Dissemination, Research Methodology, School Environment.

ED 018 151

Schools Without Walls. Profiles of Significant Schools. Educational Facilities Labs. Inc., New York, N.Y. Pub Date Jun 66, EDRS Price MF $0.50 HC $2.48 60p.

Descriptors: Elementary Schools, Experimental Schools, Interior Space, School Design.

ED 018 975

Briggs, Leslie J. *Sequencing of Instruction in Relation to Hierarchies of Competence.* American Inst. for Research in Behavioral Sciences. Pub Date Oct 67, EDRS Price MF $0.50 HC $4.32 106p.

Descriptors: Experimental Programs, Learning, Programed Instruction, Sequential Learning, Sequential Programs.

ED 018 976

Diamond, Robert M. *Instructional Materials Within the Seminar. Final Report.* Miami Univ., Coral Gables, Fla. Pub Date Jul 65, EDRS Price MF $0.25 HC $1.84 44p.

Descriptors: Equipment Utilization, Instructional Materials, Student Seminars.

ED 018 977

Diamond, Robert M. *Programmed Instruction in Audio-Visual Equipment Operation and Application.* Miami Univ., Coral Gables, Fla. Pub Date Jul 65, EDRS Price MF $0.25 HC $0.80 18p.

Descriptors: Audiovisual Instruction, Programed Instruction, Projection Equipment, Teacher Education.

ED 018 978

Bosley, Howard E., Ed. and Wigren, Harold E., Ed. *Television and Related Media in Teacher Education, Some Exemplary Practices.* Multi-State Teacher Education Project, Baltimore, Md. Pub Date Aug 67, EDRS Price MF $0.50 HC $2.44 59p.

Descriptors: Inservice Teacher Education, Instructional Television, Microteaching, Observation, Teacher Education, Video Tape Recordings.

ED 018 979

Krulik, Stephen and Kaufman, Irwin. *How to Use the Overhead Projector in Mathematics Education.* Pub Date 66, EDRS Price MF $0.25 HC Not Available from EDRS 32p.

Descriptors: Mathematics Education, Overhead Projectors, Transparencies.

ED 018 980

Cooper, Bernarr, Ed. *ITFS, What It Is . . . How to Plan, Instructional Television Fixed Service.* National Education Assn., Washington, D.C. Pub Date 67, EDRS Price MF $0.50 HC Not Available from EDRS 65p.

Descriptors: Closed Circuit Television, Instructional Television, Media Technology.

ED 018 981

McHenry, Vere A. *The Use of Video Processes in Teacher Education.* Utah State Board of Education, Salt Lake City. Multi-State Teacher Education Project, Baltimore, Md. EDRS Price MF $0.25 HC $1.28 30p.

Descriptors: Episode Teaching, Instructional Improvement, Microteaching, Teacher Education, Video Tape Recordings.

ED 018 982

Schramm, Wilbur and others. *The New Media–Memo to Educational Planners.* United Nations Educational Scientific and Cult. Org. Pub Date 67, Document Not Available from EDRS.

Descriptors: Cost Effectiveness, Educational Planning, Instructional Media, Media Technology, Systems Approach.

ED 018 983

Kaimann, Richard A., Ed. and Marker, Robert W., Ed. *Educational Data Processing–New Dimensions and Prospects.* Pub Date 67, Document Not Available from EDRS.

New at the Clearinghouse—

"Evaluating Microfiche Readers," a three-page checklist to aid people contemplating such a purchase.

Individualized Instruction, a 20-page annotated bibliography by Serena E. Wade.

Complimentary copies of these clearinghouse products will be sent upon request.

Descriptors: Automation, Data Processing, Information Systems, Systems Analysis.

ED 018 984

New Educational Media in Action–Case Studies for Planners–I. United Nations Educational Scientific and Cult. Org. Pub Date 67, Document Not Available from EDRS.

Descriptors: Correspondence Study, Cost Effectiveness, Educational Radio, Educational Television, Instructional Media.

ED 018 985

New Educational Media in Action–Case Studies for Planners–II. United Nations Educational Scientific and Cult. Org. Pub Date 67, Document Not Available from EDRS.

Descriptors: Cost Effectiveness, Extension Education, Inservice Teacher Education, Instructional Media, Junior Colleges.

ED 018 986

New Educational Media in Action–Case Studies for Planners–III. United Nations Educational Scientific and Cult. Org. Pub Date 67, Document Not Available from EDRS.

Descriptors: Developing Nations, Educational Facilities, Educational Television, Illiteracy, Instructional Media.

ED 018 987

Rufsvold, Margeret I. and Guss, Carolyn. *Guides to Newer Educational Media. Second Edition.* American Library Assn., Chicago, Ill. Pub Date 67, Document Not Available from EDRS.

Descriptors: Audiovisual Aids, Indexes (Locaters), Information Sources, Instructional Media.

ED 018 983

Summary Report on the Lake Okoboji Audiovisual Leadership Conference (10th, Milford, Iowa, August 16-20, 1964). Iowa Univ., Iowa City. National Education Assn., Washington, D.C. EDRS Price MF $0.50 HC $4.60 113p.

Descriptors: Audiovisual Aids, Educational Facilities, Educational Resources, Facility Guidelines, Instructional Media.

ED 018 989

Marsh, Luther A. and Pierce-Jones, John. *Programmed Instruction as an Adjunct to a Course in Adolescent Psychology.* Pub Date 09 Feb 68, EDRS Price MF $0.25 HC $0.68 15p.

Descriptors: Curriculum Evaluation, Learning, Programed Instruction, Programed Materials, Teaching Methods.

ED 018 990

Stoian, Stanciu. *Pedagogy and Cybernetics.* Joint Publication Research Service, Washington, D.C. Pub Date 14 Jan 64, Document Not Available from EDRS.

Descriptors: Algorithms, Cybernetics, Educational Theories, Interaction, Teaching Machines.

ED 018 991

Shapovalenko, S. G. *Programed Teaching of Chemistry.* Joint Publication Research Service, Washington, D.C. Pub Date 14 Jan 64, Document Not Available from EDRS.

Descriptors: Algorithms, Chemistry Instruction, Cybernetics, Programed Instruction.

ED 018 992

Lebedev, P. D. *Computers for Education.* Joint Publication Research Service, Washington, D.C. Pub Date 05 Jun 63, Document Not Available from EDRS.

Descriptors: Curriculum Development, Programed Instruction, Teaching Machines, Teaching Techniques.

ED 018 993

Cybernetics in Education. Joint Publication Research Service, Washington, D.C. Pub Date 28 Jun 63, Document Not Available from EDRS.

Descriptors: Cybernetics, Programed Instruction, Teaching Machines, Teaching Methods.

ED 018 994

Landa, L. N. *The Cybernetic Approach to Educational Theory.* Joint Publication Research Service, Washington, D.C. Pub Date 01

Mar 63, Document Not Available from EDRS.
Descriptors: Cognitive Processes, Cybernetics, Educational Objectives, Educational Theories, Programed Instruction.

ED 018 995
Kulik, V. T. *Group Studies with the Use of Programmed Texts.* Joint Publication Research Service, Washington, D.C. Pub Date 09 Jan 64, Document Not Available from EDRS.
Descriptors: Algorithms, Branching, Conventional Instruction, Feedback, Programed Instruction.

ED 018 996
Skinner, B. F. *The Technology of Teaching. The Century Psychology Series.* Pub Date 68, Document Not Available from EDRS.
Descriptors: Instructional Technology, Learning Theories, Reinforcement, Teaching, Teaching Machines.

ED 018 997
Developments in Programmed Teaching in the USSR. Joint Publication Research Service, Washington, D.C. Pub Date 26 Dec 63, Document Not Available from EDRS.
Descriptors: Algorithms, Individual Study, Language Instruction, Programed Instruction, Programed Materials.

ED 018 998
Doroshkevich, A. M. *First Results of Work with a Programmed Textbook.* Joint Publication Research Service, Washington, D.C. Pub Date 30 Jan 64, Document Not Available from EDRS.
Descriptors: Programed Instruction, Programed Texts.

ED 018 999
Nimnicht, Glendon P. and Partridge, Arthur R. *Designs for Small High Schools.* Colorado State College, Greeley. Pub Date 62, Document Not Available from EDRS.
Descriptors: Classroom Design, Flexible Scheduling, High Schools, Multipurpose Classrooms, School Design.

ED 019 000
Shaw, Robert A. and Jacobson, Milton D. *A Computerized Determination of the Readability of Programmed Materials Using Complete Units.* EDRS Price MF $0.25 HC $0.72 16p.
Descriptors: Educational Experiments, Programed Materials, Reading Difficulty.

ED 019 001
Naeslund, Jon. *Experiments with Closed Circuit Television (CCTV).* Stockholm School of Education (Sweden). Pub Date Oct 67, EDRS Price MF $0.25 HC $0.44 9p.
Descriptors: Closed Circuit Television, Teacher Education, Television Research, Training Laboratories.

ED 019 002
Morrison, Arthur H. *An Experimental Study Utilizing Closed-Circuit Television in the Teaching of Dental Techniques.* New York Univ., N.Y., Coll. of Dentistry. Pub Date 67, EDRS Price MF $0.50 HC $4.96 122p.
Descriptors: Closed Circuit Television, Conventional Instruction, Dental Schools, Educational Experiments.

ED 019 003
Eriksson, Bo. *Planning and Construction of a University Course in Educational Technology.* Gothenburg Univ. (Sweden), Inst. of Educ. Pub Date Jan 68, EDRS Price MF $0.25 HC $0.48 10p.
Descriptors: Course Content, Course Organization, Curriculum Development, Educational Change.

ED 019 004
Teaching Machine Study. Final Report. EVCO, Albuquerque, N.M. Pub Date 13 Jan 67, EDRS Price MF $0.25 HC $1.76 42p.
Descriptors: Job Training, Mathematics Instruction, Programed Instruction, Programed Materials, Teaching Machines.

ED 019 005
Hawkridge, D. G. *Programmed Learning in Central African Contexts.* Rhodesia Univ. Coll., Salisbury. EDRS Price MF $0.50 HC $3.72 91p.
Descriptors: Evaluation, Negro Education, Programed Instruction, Programed Materials.

ED 019 006
New Relationships in Instructional Television, Proceedings of the Conference Jointly Sponsored by the Education Section of the Electronic Industries Association and the Instructional Division of the National Association of Educational Broadcasters. Electronic Industries Assn., Washington, D.C. National Assn. of Educational Broadcasters. Educational Media Council Inc., Washington, D.C. EDRS Price MF $0.75 HC $7.08 175p.
Descriptors: Cooperative Programs, Educational Change, Instructional Television, Organizational Change, Urban Education.

ED 019 007
The 1968 Catalog of Recorded Television Courses Available from National Great Plains Instructional Television Library. Nebraska Univ., Lincoln. EDRS Price MF $0.50 HC $4.64 114p.
Descriptors: Catalogs, Instructional Television, Telecourses, Televised Instruction.

ED 019 008
Multi-Media Catalog of the Instructional Materials Center. Saginaw Intermediate School District, Mich. EDRS Price MF $0.50 HC $4.72 116p.
Descriptors: Audiovisual Aids, Catalogs, Instructional Media.

ED 019 009
Archer, N. Sidney and Woodlen, Milton C. *The Teacher, Programed Materials, and Instructional Interaction–An Assessment of Five Selected Conditions of Teacher and Program Integration. Final Report.* Pennsylvania State Dept. of Public Instruction. Pub Date May 67, EDRS Price MF $0.25 HC $1.12 26p.
Descriptors: Algebra, Programed Instruction, Programed Materials, Teacher Attitudes, Teaching Methods.

ED 019 010
Silvern, Leonard C. *A Systems Approach Utilizing General-Purpose and Special-Purpose Teaching Machines.* Hughes Aircraft Co., Los Angeles, Calif. Pub Date 16 Nov 61, Document Not Available from EDRS.
Descriptors: Instructional Aids, Job Training, Personnel Evaluation, Task Performance, Teaching Machines.

ED 019 011
Ingle, Henry T. *A Basic Reference Shelf on the New Media and Teacher Training. A Series One Paper from ERIC at Stanford.* Stanford Univ., Calif. Inst. for Commun. Res. Pub Date May 68, EDRS Price MF $0.25 HC $0.56 12p.
Descriptors: Annotated Bibliographies, Instructional Media, Research Methodology, Teacher Education.

ED 019 012
MacConnell, James D. and Schiller, Clarke E. *A Basic Reference Shelf on Facilities for Instructional Media. A Series One Paper from ERIC at Stanford.* Stanford Univ., Calif. Inst. for Commun. Res. Pub Date Mar 68, EDRS Price MF $0.25 HC $0.64 14p.
Descriptors: Annotated Bibliographies, Educational Planning, Facility Case Studies, Instructional Media.

ED 019 013
Glaser, Robert and Marino, Mary Louise. *A Basic Reference Shelf on Programed Instruction. A Series One Paper from ERIC at Stanford.* Stanford Univ., Calif. Inst. for Commun. Res. Pub Date Jun 68, EDRS Price MF $0.25 HC $0.44 9p.
Descriptors: Annotated Bibliographies, Computer Assisted Instruction, Educational Objectives, Learning Theories, Programed Instruction.

ED 019 847
Pinney, Robert H. and Miltz, Robert J. *Television Recordings and Teacher Education–New Directions.* Stanford Univ., Calif. Stanford Ctr. for R. and D. EDRS Price MF $0.25 HC $1.08 25p.
Descriptors: Microteaching, Teacher Education, Teacher Interns, Teaching Skills, Video Tape Recordings.

ED 019 848
Schramm, Wilbur. *Instructional Television–Promise and Opportunity.* National Assn. of Educational Broadcasters. Pub Date Jan 67, EDRS Price MF $0.25 HC $1.04 24p.
Descriptors: Communication Satellites, Educational Planning, Educational Problems, Instructional Television, Teaching Techniques.

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ED 019 849
Markle, David G. *Controlling Behavior Changers' Behavior.* EDRS Price MF $0.25 HC $0.96 22p.
Descriptors: Behavioral Objectives, Instrumentation, Programers, Programing Problems, Skill Development.

ED 019 850
Atutov, P. R. *The Application of Cybernetics in Pedagogy.* Joint Publication Research Service, Washington, D.C. Report Number JPRS-23,187. Pub Date 11 Feb 64, Document Not Available From EDRS.
Descriptors: Automation, Cybernetics, Educational Philosophy, Mathematical Models, Scientific Concepts.

ED 019 851
Index to 16MM Educational Films. University of Southern California, Los Angeles. Pub Date 67, Document Not Available From EDRS.
Descriptors: Catalogs, Films, Indexes (Locaters), Instructional Films.

ED 019 852
Alford, W. Wayne. *NAEB History, Volume 2, 1954 to 1965.* National Assn. of Educational Broadcasters. Pub Date 66, Document Not Available From EDRS.
Descriptors: Broadcast Industry, Educational History, Educational Legislation, Educational Television.

ED 019 853
Harrison, J. A., Ed. *European Research in Audio-Visual Aids. Part I, Bibliography.* Council of Europe, Strasbourg (Austria), Pub Date 66, EDRS Price MF $0.50 HC $4.68 115p.
Descriptors: Audiovisual Aids, Bibliographies, Media Research.

ED 019 854
Allison, Mary L., Comp. *New Educational Materials, Pre-Kindergarten Through Grade Twelve.* Report Number TX-1131, Pub Date 67, Document Not Available From EDRS.

ED 019 855
Computer Facilities for Mathematics Instruction. National Council of Teachers of Mathematics Inc. EDRS Price MF $0.25 HC Not Available From EDRS 51p.
Descriptors: Computer Assisted Instruction, Cost Effectiveness, Secondary School Mathematics, Systems Approach, Time Sharing.

ED 019 856
McKune, Lawrence E., Comp., Ed. *National Compendium of Televised Education. Volume 14.* Michigan St. Univ., East Lansing. Pub Date 1 Sep 67, Document Not Available From EDRS.
Descriptors: Higher Education, Instructional Television, Reference Books, Schools.

New Index to Journals Announced for April

A new publication, *Current Index to Journals in Education*, is scheduled for appearance in April. That first monthly issue will cover about 220 educational journals, including *Audiovisual Instruction, AV Communication Review, Educational Broadcasting Review* and *Educational Technology*.

The new index will oe a sister publication to *Research in Education*, which also is a monthly product of the ERIC system. Unlike *Research in Education*, however, the new publication will be an announcement service only; it will not include abstracts, and reproductions of the journal articles will not be available from the ERIC Document Reproduction Service.

The Information Sciences division of Crowel Collier Macmillan has been awarded the contract for publication of *Current Index to Journals in Education*, and will announce subscription rates. Semi-annual cumulated volumes will be available.

BULLETIN
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Price and Pages–Whenever possible, the price of the document in microfiche (MF) and hardcopy (HC) is given, along with its length.

Descriptors–The descriptive terms represent the subject matter of the documents.

ED 109 857

New Methods and Techniques in Education, Educational Studies and Documents, Number 48., United Nations Educational Scientific and Cult. Org., 1963, Available in 1963 for $1.00 from UNESCO, Place De Fontenoy, Paris-7E, France.

Descriptors: Conference Reports, Instructional Media, Teaching Procedures, Autoinstructional Methods, Computers, Cultural Differences, Cybernetics, Developing Nations, Educational Theories, Instructional Television, Programed Instruction, Radio, Teaching Machines, USSR.

ED 019 858

Programmed Instruction in West Africa and the Arab States, A Report on Two Training Workshops, Educational Studies and Documents, No. 52, Komoski, P. Kenneth and Green, Edward J., United Nations Educational Scientific and Cult. Org, 1964, Available from UNESCO, Place De Fontenoy, Paris-7E, France.

Descriptors: Program Design, Program Evaluation, Summer Workshops, Curriculum, Educational Experiments, Evaluation Methods, Experimental Programs, Intercultural Programs.

ED 109 859

A-V Instruction, Materials and Methods, Second Edition, Brown, James W. and others, 1964, Available from McGraw-Hill Book Company, New York, N.Y.

Descriptors: Equipment, Instructional Aids.

ED 019 860

The Impact of Television Methods and Findings in Program Research, Belson, W. A., 1964, available from Archon Books, Shoe String Press, Inc., 60 Connelly Parkway, Hamden, Conn., 06514.

Descriptors: Changing Attitudes, Research Design, Television Research, Television Surveys, Television Viewing, Adult Learning, Audience Research BBC, Broadcast Television, Incidental Learning, Social Influences.

ED 019 861

Guide for Art Instruction Through Television for the Elementary Schools, Barkan, Manuel and others, National Center for School and Coll. Television, 1967, Available from the National Instructional Television Center, Box A, Bloomington, Indiana 47401.

Descriptors: Art Education, Elementary Schools, Guidelines, Art Appreciation.

ED 019 862

Educational Television Conference in Newfoundland and Labrador, An Abstract of the Proceedings (St. John's, Newfoundland, September 6-9, 1966), Miller, Lewis, Ed., Memorial Univ., St. John's (Newfoundland), 1967, Available from the Queen's Printer, Ottawa.

Descriptors: Educational Resources, Systems Development, Television Teachers, Adult Education, Agricultural Education, BBC, CBS, Closed Circuit Television, Communication Satellites, Fisheries, Glasgow, NHK, Teacher Education.

ED 019 863

Teaching by Correspondence, UNESCO Source Book, Number 3, Erdos, Renee F, United Nations Educational Scientific and Cult. Org, 1967, Available from Longmans, Green and Co. Limited, 48 Grosvenor Street, London W1, England and by UNESCO, Place De Fontenoy, Paris-7E, France, and is available as A2217 for $3.25.

Descriptors: Supplementary Education, Administrative Organization, Adult Education Programs, Audiovisual Instruction, Costs, Curriculum, Multimedia Instruction, Programed Instruction.

ED 019 864

Programmes in Print 1966, Cavanagh, Peter, Comp., Ed., and Jones, Clive, Comp., Ed., Association for Programmed Learning,December 1967, Available from The Association for Programmed Learning, 27 Torrington Square, London WC1.

Descriptors: Program Descriptions, Program Evaluation, Programed Materials, Comparative Analysis, Program Costs.

ED 019 865

One Week of Educational Television, Number Four, April 17-23, 1966, National Center for School and Coll. Television, Brandeis Univ., Waltham, Mass., Morse Commun. Center, 1966, Available from the National Instructional Television Center, Box A, Bloomington, Indiana, 47401.

Descriptors: Educational Television, Television Curriculum, Television Surveys, Television Viewing, College Instruction.

ED 019 866

A Description of Variables and Their Implementation in Studies of Principles for the Programing of High School Algebra. Comparative Studies of Principles for Programing Mathematics in Automated Instruction, Technical Report No. 8, Rosen, Ellen F. and Stolurow, Lawrence M., Illinois Univ., Urbana, July 1964, EDRS Price MF 50c HC $3.68 90p.

Descriptors: Learning Theories, Programed Texts, Time Factors (Learning), Learning Activities, Mathematics Instruction.

ED 019 867

Good Frames and Bad–A Grammar of Frame Writing, Markle, Susan Meyer, 1964, Available from John Wiley and Sons, New York, N.Y.

Descriptors: Programed Instruction, Branching.

ED 019 868

American Standard Guide for School Lighting, American Institute of Architects, Washington, D.C., National Council on Schoolhouse Construction, Illuminating Engineering Soc., New York, N.Y., 1962, Available from the Illuminating Engineering Society, 345 East 47th Street, New York, N.Y.

Descriptors: Educational Equipment, Lighting, Vision, Auditoriums, Classroom Design, Dormitories, Equipment Maintenance, Gymnasiums, Laboratories, Libraries, Visually Handicapped.

ED 019 869

The Use of Architectural Acoustical Materials, Theory and Practice, Second Edition, Acoustical Materials Assn., New York, N.Y., 1965, Available for 50c from Acoustical Materials Association, 335 East 45th St., New York, N.Y. 10017.

Descriptors: Acoustical Environment, Architecture, Auditoriums, Building Design, Classrooms, Environmental Influences, Gymnasiums, Music, Physical Facilities, School Construction.

ED 019 870

The Design for Utilizing Programed Instruction for Pre-School Children, Lee, Billy Eugene, Biloxi Municipal Separate School District, Miss., EDRS Price MF 25c, HC 96c, 22p.

Descriptors: Cartoons, Low Ability Students, Moral Values, Preschool Children, Programed Instruction, Economically Disadvantaged.

ED 019 871

An Experimental Evaluation of Visual Illustrations Used to Complement Programed Instruction, Dwyer, Francis M., Jr, September 1967, EDRS Price MF 25c, HC $1.28 30p.

Descriptors: Programed Instruction, Time Factors (Learning), Verbal Stimuli, Visual Stimuli, Achievement, Comprehension, Pictorial Stimuli, Retention, Transfer of Training, Vocabulary.

ED 019 872

Teaching Machines and Programmed Learning, A Source Book, Lumsdaine, A.A., Ed. and Glaser, Robert, Ed., Department of Audiovisual Instruction, Wash., D.C., 1960, Available for $7.50 from the National Education Association, 1201 Sixteenth Street, N.W., Wash., D.C. 20036.

Descriptors: Learning Theories, Programed Instruction, Teaching Machines, Instructional Technology, Linear Programing, Multichannel Programing, Programing Problems, Response Mode, Textbook Evaluation, Visual Discrimination Machines.

ED 019 873

Planning, Construction, and Evaluation of Media for Teaching High School and Junior College Science via Television for Use in Self Instruction, Final Report, White, Harvey E., California Univ., Berkeley, March 31, 1967, EDRS Price MF 25c, HC $1.96 47p.

Descriptors: Audiovisual Aids, Autoinstructional Aids, Teaching Models, Biology Instruction, Chabot Observatory, Chemistry Instruction, Microscopes, Physics Instruction, Tape Recordings.

ED 019 874

Guide for Cooperative Evaluation of County and District Audio-Visual Programs, California State Dept. of Education, Sacramento, Audio-Visual Education Assn. of California, 1967, EDRS Price MF 25c HC $1.76 42p.

Descriptors: Audiovisual Programs, Evaluation Methods, Cooperative Programs, Equipment Standards, School Personnel.

ED 019 875

An Electronic Communication System for Classroom Use with the Poorly Motivated Student, Final Report, Schwitzgebel, Robert, California Univ., Los Angeles, Dept. of Psychology, August 1967, EDRS Price MF 25c HC 72c 16p.

Descriptors: Electronic Equipment, Operant Conditioning, Reactive Behavior, Tactual Perception, Aggression, Anti-Social Behavior, Attention Span, Behavior Change, Electromechanical Aids, Feedback, Haptic Perception, Semiotics, Time Factors (Learning), Verbal Operant Conditioning.

ED 019 876

Filmic Communication and Complex Learning, Working Paper No. 4, Pryluck, Calvin, EDRS Price MF 25c HC 80c 18p.

Descriptors: Audiovisual Communication, Discovery Learning, Instructional Films, Cognitive Processes, Concept Formation, Deductive Methods, Experience, Inductive Methods, Language, Media Research, Perceptual Motor Learning, Transformations (Language).

ED 019 877

Studies in Cine-Psychometry II–Continued Factoring of Audio and Visual Cognition and Memory, Final Report, Seibert, Warren F. and Reid, J. Christopher, Purdue Univ., Lafayette, Ind., Audio Visual Center, December 1967, EDRS Price MF 50c HC $2.68 65p.

Descriptors: Cognitive Ability, Factor Analysis, Psychometrics, Aural Stimuli, Films, Kaiser Image Analysis, Memory, Pictorial Stimuli, Recall, Time Factors (Learning), Visual Stimuli.

ED 019 878

Communication in the Space Age, the Use of Satellites by the Mass Media, United Nations Educational Scientific and Cult. Org, 1968, Available from UNESCO, Place De Fontenoy, Paris-7E, France.

Descriptors: Communication Satellites, Developing Nations, Information Dissemination, International Education, Legal Problems, Libraries, News Media, Pilot Projects, Programing Problems, Public Opinion.

ED 019 879

Graduate Engineering Education via Television, Forsman, Marion E., EDRS Price MF 25c HC 80c 18p.

Descriptors: Closed Circuit Television, Engineering Education, Graduate Study, Computers, Cost Effectiveness.

ED 019 880

The Effects on Learning from a Motion Picture Film of Selective Changes in Sound Track Loudness Level, Final Report, Moakley, Francis X., Indiana Univ., Bloomington, Audio-Visual Center, January 1968, EDRS Price MF 75c HC $5.36 132p.

Descriptors: Attention, Auditory Descrimination, Auditory Perception.

ED 019 881

Programed Instruction in Large School Systems, American Assn. of School Administrators, September 1966, EDRS Price MF 50c, HC not available from EDRS 60p.

Hardcopy, Some Fiche To Cost More from EDRS

Rising costs have forced an adjustment in some of the prices of the ERIC Document Reproduction Service.

Individual orders for specific microfiche will still be handled at 25c per fiche, but standing orders placed for all the fiche added to the ERIC collection each month will be billed at 11c per fiche, up from 8.4c.

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New at the Clearinghouse—

Media and the Disadvantaged, a review of the literature by Serena E. Wade with critique and marginal commentary by Adelaide Jablonsky. This paper was jointly commissioned by ERIC at Stanford and the ERIC Information Retrieval Center on the Disadvantaged at Teachers College, Columbia University.

A complimentary copy of this Series Two paper will be sent upon request.

Descriptors: Instructional Innovation, Programed Instruction, Programed Materials, Autoinstructional Aids, Educational Experiments, Enrichment Programs, Individualized Programs, Physically Handicapped, Remedial Programs.

ED 019 882

Learner Response, Feedback, and Review in Film Presentation, Final Report, Allen, William H. and others, University of Southern California, Los Angeles, March 20, 1968, EDRS Price MF 50c HC $4.20 103p.

Descriptors: Feedback, Instructional Films, Repetitive Film Showings, Response Mode, Review, Covert Response, Oceanology, Overt Response, Verbal Stimuli, Visual Stimuli.

ED 019 883

The Effectiveness of Self Instruction in Teacher Education Using Modelling and Video Tape Feedback, Young, David B., EDRS Price MF 25c HC $1.52 36p.

Descriptors: Lecture, Methods Research, Teacher Education, Teaching Techniques, Video Tape Recordings, Classroom Techniques, Feedback, Internship Programs, Microteaching.

ED 019 884

LP II–A Goal Programming Model for Media, Charnes, A. and others,, Carnegie Inst. of Tech., Pittsburgh, Pa., Northwestern Univ., Evanston, Ill., January 11, 1967, Available from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Va. 22151, Microfiche 65c, Hardcopy $3.00.

Descriptors: Linear Programing, Mathematical Models, Media Research, Operations Research, Time.

ED 019 885

An Instructional Management System for the Public Schools, Coulson, John E., System Development Corp., Santa Monica, Calif., June 12, 1967, Available as AD-654-621 from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Va. 22151, Microfiche 65c Hardcopy $3.00.

Descriptors: Computer Assisted Instruction, Experimental Programs, Individual Instruction, Input Output Analysis, Systems Development, Educational Objectives, Electronic Equipment, Information Processing, Teaching Techniques, Test Results.

ED 019 886

School Television, Great Cities, 1967, A Study of the Status and Needs of the Schools, as Served by Television in Sixteen Great Cities, Fund for Media Research, Chicago, Ill., November 1967, EDRS Price MF 75c HC $5.88 145p.

Descriptors: City Problems, Cooperative Programs, Instructional Television, Urban Schools, Closed Circuit Television, Elementary Grades, Equipment Utilization, Facility Case Studies, Personnel, Program Costs, Supplementary Education, Teacher Shortage, Teaching Load, Teaching Quality.

ED 019 887

Improving the Quality of Teacher Performance by the Use of the Video Tape Recorder. Final Report., Bern, Henry A., Indiana University, Bloomington, December 1967, EDRS Price MF 25c HC $1.64 39p.

Descriptors: Behavior Rating Scales, Feedback, Methods Research, Student Teachers, Video Tape Recordings, Concept Formation, Cybernetics, Self Evaluation.

ED 019 888

Computer Oriented Mathematics, An Introduction for Teachers, National Council of Teachers of Mathematics Inc.,1963, EDRS Price MF $1.00 HC not available from EDRS, 212p.

Descriptors: Secondary School Mathematics, Analog Computers, Brainiac, Comp, Compiac, Computer Programs, Digital Computers, Mathematical Enrichment, Minivac, Papac.

ED 019 889

Reviews of Films, Report of Some Reviewing Committees, National Council of Teachers of Mathematics Inc., EDRS Price MF 25c, HC not available from EDRS, 29p.

Descriptors: College Mathematics, Instructional Films, Secondary School Mathematics, Reference Materials, Resource Guides, Teacher Training Education.

ED 019 890

The World of Teaching Machines, Programed Learning and Self-Instructional Devices, Foltz, Charles I, Electronic Teaching Laboratories, Washington, D.C., 1961, Available for $5.95 from the Teaching Research and Technology Division of Electronic Teaching Laboratories, 5034 Wisconsin Ave., N.W., Washington, D.C. 20036.

Descriptors: Learning Motivation, Learning Theories, Program Design, Programed Instruction, Teaching Machines, Autoinstructional Aids, Branching, Multiple Choice Tests, Program Attitudes, Prompting, Reinforcement, Student Attitudes.

ED 019 891

A Programed Primer on Programing, Volume II, Practical Problems, Second Edition, Markle, Susan Meyer, Columbia Univ., New York, Inst. for Educ. Tech, 1961, Published by the Center for Programed Instruction, Inc., 365 West End Ave., New York, N.Y.

Descriptors: Programed Texts, Programing, Prompting, Concept Teaching, Sequential Learning.

ED 019 892

The First Book of Teaching Machines, Epstein, Sam and Epstein, Beryl, Published by Franklin Watts, Inc., 575 Lexington Ave., New York, N.Y.

Descriptors: Classroom Environment, Individual Instruction, Learning Theories, Programed Instruction, Teaching Machines, Autoinstructional Aids, Autotutor, B. F. Skinner, Didak, Educational History, Individualized Programs, Min/Max, Sidney L. Pressey.

ED 019 893

A Guide to Programed Instruction, Lysaught, Jerome P. and Williams, Clarence M., 1963, Published by John Wiley and Sons,

Pre-Publication Rate Announced for Journal Index

Plans are near completion for the new *Current Index to Journals in Education,* and subscription rates have been set.

The new index will be a companion publication of *Research in Education,* but will not contain abstracts.

ERIC at Stanford and the other 18 ERIC clearinghouses will monitor the educational journals and additional periodicals in related fields to make the new index comprehensive. Unlike RIE, which is published by the Government Printing Office, CIJE will be published by CCM Information Sciences, Inc., a subsidiary of Crowell Collier and Macmillan, Inc.

An introductory price of $29.50 for 12 monthly issues has been announced. After June 1, 1969, the regular rate of $34 will be in effect. Other prices established include $24.50 for the cumulated annual issue, $12.50 for the cumulated semi-annual issue, and a package price of $30 for both cumulated issues when a monthly subscription also is entered.

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Because some things are sacred, this issue of *Now Available* looks a lot like former ones. But inside, it's a little different.

In the past, if a document were not available from the ERIC Document Reproduction Service, we bluntly said "Not Available from EDRS." From now on, we tell where it is available. A little more effort on our part—very little, to be honest—to make things a little more convenient for you.

From now on, it's titles before authors, not because authors aren't important but because scanning the list of documents will be facilitated by the change.

And the descriptors will be more carefully chosen from now on. Rather than just printing the major descriptors (the ones used for indexing in the monthly *Research in Education*), we will list those descriptors which do the best job of differentiating a document from others. And if the document is titled "Instructional Television in Teaching Geography" we'll try to avoid, as redundant, the descriptors *Instructional Television* and *Geography*.

One other change, a minor one, is in the works. If descriptors fail to give much idea of a document's contents, we'll present a one sentence summary instead.

We might, in the future, even list the accession numbers—the "ED numbers"—last. We have come to suspect that no one scans *Now Available* looking for special lucky numbers.

But be assured. In this ever-changing world where the *Saturday Evening Post* goes out of business one day and *Now Available* even changes its handling of descriptors, some things still are sacred.

We intend to keep the oak trees.

Inc., New York, N.Y.

Descriptors: Program Development, Branching, Educational Objectives, Evaluation, Learning, Linear Programing, Little, Multichannel Programing, Pressey, Programed Materials, Skinner, Thorndike.

ED 019 894

Library and Multimedia Projects, Descriptions of Special Projects Approved Under Title II Elementary and Secondary Education Act of 1965 (1966-1967), State Univ. of N.Y., Albany, New York State Education Dept., Albany, 1967, EDRS Price MF 50c, HC $2.60 63p.

Descriptors: Grants, Instructional Materials Centers, Library Expenditures, Reference Books, School Libraries, Audiovisual Centers, Cataloging, Curriculum, Instructional Media Library Equipment.

ED 020 650

Five-Foot Shelf Bibliography on New Media and Instructional Technology, University of Southern California, Los Angeles, 1967, EDRS Price MF 25c HC 36c 7p.

Descriptors: Instructional Media, Instructional Technology, Audiovisual Aids, Computers, Copyrights, Educational Theories.

ED 020 651

The Mediated Dialogue, An Account of the Experimental National Media Institutes in the Academic Disciplines, University of Southern California, Los Angeles, EDRS Price MF 25c, HC 56c, 12p.

Descriptors: Inservice Education, NDEA Act.

BULLETIN
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Documents Processed By the Clearinghouse

Most documents listed here can be ordered, in microfiche or hardcopy form, from the ERIC Document Reproduction Service. If a document is not available from EDRS, information is given on where it can be obtained, or at least where it was published. Future *Now Available"* lists will continue to keep you informed of all materials input by ERIC at Stanford.

Though enough information is provided here to allow documents to be ordered, the appropriate issues of *Research in Education* contain detailed resumes, and you may wish to check those first. In addition, *Research in Education* lists the documents input by all the other clearinghouses in the ERIC system, and some of those documents are relevant to educational media and technology.

Explanation of the Entries

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Price and Pages–Whenever possible, the price of the document in microfiche (MF) and hardcopy (HC) is given, along with its length.

Descriptors–In cases where a one-sentence summary is not feasible, descriptive terms represent the subject matter of the documents.

A Bibliography of Educational Television and Related Communication Systems, National Assn. of Educational Broadcasters, July 1967, EDRS Price MF 25c, HC $2.04, 49p, ED 020 652

This bibliography was developed as an aid to legislators, their research staffs, institutions of higher learning, and to individual researchers interested in the area of inter-institutional television.

Cooperative Instruction by Television in the Schools of American Samoa, an Outline of the Organization and Procedures, Bronson, Vernon, National Assn. of Educational Broadcasters, Feb 66, EDRS Price MF 25c, HC $1.00, 23p, ED 020 653.

This outline discusses the establishment of a new television-based system of instruction in American Samoa. After listing 12 major problems in the educational system as of 1961, the outline raises policy questions and reports on a proposal to apply educational technology to these problems.

An Investigation of the Applicability of Motion Pictures to Educational Testing. Final Report, Van Horn, Charles, Illinois Univ., Urbana, 31 Aug 67, EDRS Price MF 25c, HC $1.60, 38p, ED 020 654

Descriptors: Auditory Visual Tests, Economic Status, Educational Experiments, Evaluation, Factor Analysis, Guildford Zimmerman Temperament Survey, Personality Tests, Sex Differences.

The National Center for School and College Television–A Demonstration of a National Program Agency for Instructional Television. Final Report, Jordan, James R, Indiana Univ. Foundation, Bloomington, March 68, EDRS Price MF $1.00, HC $8.40, 208p, ED 020 655.

Findings of the NCSCT's two-year demonstration program include (1) few materials produced for local scheduling are suitable for widespread use, (2) a high percentage of reuse indicates that the center's materials are satisfactory, (3) accelerated NCSCT activity is needed most in elementary education, and (4) professional educational organizations and school systems will commit resources to NCSCT's efforts.

The Use of Closed Circuit Television in Technical Education, Report of the European Seminar (Scraing, Belgium, April 1965), Council of Europe, Strasbourg (Austria), 1966, EDRS Price MF 50c, HC $3.84, 94p, ED 020 656.

At a European seminar participants from Belgium, the United Kingdom, France, Sweden, Austria, Germany, Ireland, Netherlands, Norway, Spain, and the Holy See discussed closed circuit television as a teaching aid in technical education.

Fundamentals of television Systems, William J. Kessler, National Assn. of Educational Broadcasters, Feb 1968, EDRS Price MF 50c, HC $3.28, 80p, ED 020 657

Designed for a reader without special technical knowledge, this illustrated resource paper explains the components of a television system and relates them to the complete system.

A Study of the Relative Effectiveness of Varied Visual Illustrations. Final Report, Francis M. Dwyer, Jr., Pennsylvania State Univ., University Park, September 1967, EDRS Price MF 75c, HC $7.00, 173p, ED 020 658.

The relative effectiveness of eight types of visual illustration of the human heart was tested in ninth through twelfth grade classes.

Effectiveness of Film in Changing Parental Attitudes. Final Report, Marvin L. Hanson, Utah Univ., Salt Lake City, January 1968, EDRS Price MF 25c, HC 68c, 15p, ED 020 659.

Preceding and following the showing of a color and sound film designed to educate parents concerning the importance of their role in the development of normal speech habits in their children, two forms of an attitude questionnaire were filled out by an audience of 56 parents of children with articulation problems and 171 parents of normal children.

The Computer as an Aid in Teaching Mathematics, an Instructional Bulletin, Grades 7-10, Seymour Lerner, Los Angeles City Schools, Calif., 1967, EDRS Price MF 50c, HC $4.36, 107p, ED 020 660.

Starting with the premise that a child who learns to operate a computer is led by his new self esteem toward a greater interest in his courses, the authors state that computer education will also meet these objectives–(1) increase skills, (2) aid in concept understanding, (3) increase problem solving ability, (4) stimulate individual research, and (5) develop desirable habits.

Highlights of Schools Using Educational Media, Department of Audiovisual Instruction, Wash., D.C., EDRS Price MF $1.25, HC not available from EDRS, 320p, ED 020 661.

This is a guide to the educational programs of 247 schools making significant use of instructional media in the United States. Initial identification of schools was accomplished by sending two-part questionnaires to 12,229 school systems, processing data from 2,148 returned questionnaires, and sending out three-man teams in each of the 50 states to visit 344 school systems.

Report to the Central Michigan Educational Resources Council on the Feasibility of an Interconnected Telecommunication System for the 39 County Region of Michigan, Central Michigan Educational Resources Council, June 30, 1967, EDRS Price MF $1.00, HC $8.44, 209p, ED 020 662.

This report examines the feasibility of electronically connecting Northern and Central Michigan area schools for data processing and for instructional, administrative, information, and audio services. Data gathered through questionnaires, discussions, workshops, and visitations demonstrate the general desire for participation in an instructional TV system with a wide range of classroom courses.

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The Peace Corps Educational Television (ETV) Project in Colombia – Two Years of Research. Research Report No. 1, The Project as a Whole – Organization, Adaptation, and Expansion, George Comstock and Nathan Maccoby, Stanford Univ., Calif. Inst. for Commun. Res., November 1966, EDRS Price MF 50c, HC $3.48, 85p, ED 020 663.

Colombian attitudes were mainly favorable, and the project aroused enthusiasm among the majority of teachers and administrators. The major problems were in production and programing, utilization in classrooms (due to insufficient facilities and motivation), and occasional lack of commitment from authorities.

The Peace Corps Educational Television (ETV) Project in Colombia – Two Years of Research. Research Report No. 2, the Project's First Semester – Pupil Achievement, Teacher Attitudes, and the Work of the Utilization Volunteer, George Comstock and Nathan Maccoby, Stanford Univ., Calif. Inst. for Commun. Res., November 1966, EDRS Price MF 75c, HC $6.48, 160p, ED 020 664.

The Peace Corps (ETV) project in Colombia encountered problems in TV production, installation, maintenance, utilization of televised instruction, and leadership. By June of the first semester televised elementary instruction included about 390 schools, 2,000 teachers, and 60,000 pupils. Extensive research intended to provide a basis for corrective policy-making was conducted.

The Peace Corps Educational Television (ETV) Project in Colombia – Two Years of Research. Research Report No. 3, Improving the Effectiveness of the Utilization Volunteer and the Utilization of ETV by the Colombian Teacher, Nathan Maccoby and George Comstock, Stanford Univ., Calif. Inst. for Commun. Res., November 1966, EDRS Price MF 25c, HC $1.32, 31p, ED 020 665.

This experiment in the ETV Project showed the superiority of pupil practice as a teaching method and studied the effectiveness of the utilization volunteer (a Peace Corps volunteer concerned with implementing ETV in the schools) in different situations.

The Peace Corps Educational Television (ETV) Project in Colombia – Two Years of Research. Research Report No. 4, the Colombian Teacher and the Utilization Volunteer – Making ETV Work in the Schools of a Developing Country, George Comstock and Nathan Maccoby, Stanford Univ., Calif. Inst. for Commun. Res., November 1966, EDRS Price MF 75c, HC $6.44, 159p, ED 020 666.

To focus on the daily use of ETV in Colombian schools and on the impact of the Peace Corps utilization volunteers who promoted the effective use of TV, several surveys were conducted with Colombian teachers during 1964-65, the largest with 1,884 teachers at the end of the second semester in 1965. It was found that non-teaching problems constituted a considerable obstacle to successful use of television.

The Peace Corps Educational Television (ETV) Project in Colombia – Two Years of Research. Research Report No. 6, Instructional Television for the In-Service Training of the Colombian Teacher, George Comstock and Nathan Maccoby, Stanford Univ., Calif. Inst. for Commun. Res., November 1966, EDRS Price MF 50c, HC $2.56, 62p, ED 020 667.

In order to evaluate the effectiveness of a 17-program televised course in modern mathematics for primary school teachers participating in the Peace Corps ETV project, a math test and a questionnaire were administered to 1,341 teachers, divided between course viewers and non-viewers.

The Peace Corps Educational Television (ETV) Project in Colombia – Two Years of Research. Research Report No. 8, the Televised Curriculum and the Colombian Teacher, George Comstock and Nathan Maccoby, Stanford Univ., Calif. Inst. for Commun. Res., November 1966, EDRS Price MF 50c, HC $4.80, 118p, ED 020 668.

Data from surveys of Colombian teachers' opinions of the Peace Corps ETV project showed that although the teachers were generally pleased, they felt there was much room for improvement in the curriculum and the teacher guides.

The Peace Corps Educational Television Project in Colombia – Two Years of Research. Research Report No. 10, Feedback to the Peace Corps on Project Progress – Some Models and Suggestions, George Comstock and Nathan Maccoby, Stanford Univ., Calif. Inst. for Commun. Res., November 1966, EDRS Price MF 50c, HC $4.00, 98p, ED 020 669.

Research techniques employed to evaluate the effectiveness of the Peace Corps ETV project stemmed from two models of feedback. Information provided in "individual feedback" is of value

New at the Clearinghouse—

An abridgement of Volumes 1 and 2 of *Cost Study of Educational Media Systems and Their Equipment Components* has been issued, and complimentary copies are available direct from the clearinghouse.

The abridgement, titled *Costs of Educational Media Systems,* was prepared by Michael C. Sovereign of the University of Illinois, who was principal author of those volumes. The complete study was done by General Learning Corporation, for the U.S. Office of Education.

The complete texts now are available from the ERIC Document Reproduction Service, as listed below:

Cost Study of Educational Media Systems and Their Equipment Components. Volume I. Guidelines for Determining Costs of Media Systems. Order as ED 024 273, 50c for microfiche, $4 for hardcopy.

Objective cost estimates for planning and operating systems should be made after an assessment of administrative factors (school environment) and instructional factors (learning objectives, type of presentation). Specification of appropriate sensory stimuli and the design of alternative systems also precede cost estimations for production, distribution, and reception. Researchers define a hypothetical educational task as a basis for cost comparison of alternative systems.

Cost Study of Educational Media Systems and Their Equipment and Components. Volume II, Technical Report. Order as ED 024 286, $1.25 for microfiche, $16.80 for hardcopy.

A common instructional task and a set of educational environments are hypothesized for analysis of media cost data. The analytic structure may be conceptualized as a three-dimensional matrix: the first vector separates costs into production, distribution, and reception; the second vector delineates capital (initial) and operating (annual) costs; the third vector presents cost as a function of environment. Per student equivalent annual costs are estimated for airborne television, Instructional Television Fixed Service (ITFS), satellite television, UHF television, closed circuit television, video tape recordings, film, radio, language laboratories, and dial-access systems.

Cost Study of Educational Media Systems and Their Equipment Components. Volume III, A Supplementary Report: Computer Assisted Instruction. Order as ED 024 281, 50c for microfiche, $5.80 for hardcopy.
Order as ED 024 281, 50c for microfiche, $5.80 for hardcopy.

The COST-ED model (Costs of Schools, Training, and Education) of the instructional process encourages the recognition of alternatives and potential cost-savings. It is used to calculate the minimum cost of performing specified instructional tasks. COST-ED components are presented as cost modules in a flowchart format for manpower, teachers, facilities, attrition, and student opportunity.

Schools, libraries and other organizations which have placed standing orders for all ERIC microfiche already have these documents in their collections, of course.

at a pragmatic level, whereas information from "project feedback" can be used by administrators for policy decisions.

TV Equipment, Systems, Facilities, and Personnel–A Guide for School Administrators, a Study Prepared for the California Public Schools Instructional TV Committee, Warren L. Wade, Santa Clara County Office of Educ, San Jose, Calif., April 1965, EDRS Price MF 25c, HC $1.96, 47p, ED 020 670.

Televised instruction is widespread, yet there exists little qualified, impartial information expressed in non-technical terms (as in this report), concerning equipment and personnel standards, requirements, and costs, for school administrators to consult. Evaluation of the medium's potential must be based on information concerning television's characteristics and on administrative considerations.

Structured Learning and Training Environments–A Preparation Laboratory for Advanced Mammalian Physiology, Raymond F. Johnston and Nicholas J. Fiel, Michigan State Univ., East Lansing, Educ. Dev. Program, March 1967, EDRS Price MF 25c, HC $1.44, 34p, ED 020 671.

A preparation laboratory was designed to familiarize students in advanced mammalian physiology with laboratory skills and techniques and thus shorten the time they spend in setting up actual experiments. The laboratory lasts 30 minutes, is flexible and simple of operation, and does not require a professor's presence.

The Farther Vision, Educational Television Today, Allan E. Koenig, Ed. and Ruane B. Hill, Ed., Wisconsin Univ. Madison, 1967. Available from the University of Wisconsin Press, Box 1379, Madison, Wisconsin 53701, ED 020 672.

This is a collection of articles concerned with ETV. Its history and its philosophy of use are discussed. Different roles of open circuit broadcast ETV stations and networks in relationships with each other and with their communities–university, local, state, and national–are identified.

Instructional Systems Development–A Demonstration and Evaluation Project. Final Report, John Barson, Michigan St. Univ., East Lansing, June 1, 1967, EDRS Price MF 50c, HC $5.08, 125p, ED 020 673.

Four universities cooperated with the instructional media center at Michigan State University to test, demonstrate, and refine a model for media innovation and instructional development which had been designed in an earlier project.

Three Methods of Processing Student Response Data in Programed Instruction. Comparative Studies of Principles for Programming Mathematics in Automated Instruction, Technical Report No. 7, Gerald L. Frincke and Lawrence M. Stolurow, Illinois Univ., Urbana, July 1964, EDRS Price MF 25c, HC $1.04, 24p, ED 020 674.

Worksheets from an auto-instructional program in high school algebra were used to compare data processing methods.

Achievement of Students from Groups Instructed by Programed Materials, Classroom Teacher, or Both. Comparative Studies of Principles for Programming Mathematics in Automated Instruction, Technical Report No. 12, O. Robert Brown, Jr., Illinois Univ., Urbana, July 1964, EDRS Price MF 25c, HC $1.60, 38p, ED 020 675.

Descriptors: Equated Scores, Mathematics Instruction, Program Evaluation, Ability Grouping, Algebra, Programed Units, Secondary School Mathematics, Sequential Tests of Educational Progress, Test of General Ability.

An Attempt to Find an A Priori Measure of Step Size. Comparative Studies of Principles for Programming Mathematics in Automated Instruction, Technical Report No. 13, Ellen F. Rosen and Lawrence M. Stolurow, Illinois Univ., Urbana, July 1964, EDRS Price MF 25c, HC $1.08, 25p, ED 020 676.

In order to find a good predictor of empirical difficulty, an operational definition of step size, ten programer-judges rated change in complexity in two versions of a mathematics program, and these ratings were then compared with measures of empirical difficulty obtained from student response data.

A Comparison of Linear and Branching Techniques of Programed Instruction in Plane Geometry. Comparative Studies of Principles for Programing Mathematics in Automated Instruction, Technical Report No. 1, Donald G. Beane, Illinois Univ., Urbana, July 1962, EDRS Price MF 50c, HC $4.92, 121p, ED 020 677.

Descriptors: Retention, Ability, B. F. Skinner, Geometry, Hennon Nelson Test of Mental Ability, Norman Crowder, Programed Materials, Student Attitudes.

Index to 35MM Educational Filmstrips, University of Southern California, Los Angeles, 1968, Available from McGraw-Hill Book Company, New York, N.Y., ED 020 678.

The first of the three principal sections of this reference work is a cross-referenced subject matter section serving as a guide to specific filmstrips through either a general subject or a term or topic. The middle section is an alphabetical title-descriptive section, and an alphabetical producer-distributor-production credit section completes the volume.

The Development and Improvement of a Programed Learning Sequence for Use in Constructing a Teaching Unit. Final Report, Elizabeth S. Manera and Leroy H. Griffith, Arizona State Univ., Tempe, December 20, 1967, EDRS Price MF 75c, HC $6.84, 169p, ED 020 679.

An intrinsic program on the subject of construction of teaching units was designed and tested to ascertain whether students of education would learn as efficiently by the program method as by traditional methods.

Programed Instruction and the Demonstration Method of Teaching at the Junior High Level. Final Report, Barbara Clawson and Sarah M. Shoffner, North Carolina Univ., Greensboro, January 1968, EDRS Price MF $1.00, HC $8.44, 209p, ED 020 680.

A self-instructional program on sewing was developed and compared with the traditional laboratory-demonstration method of teaching.

Experimental Research in Educational Television. Research Resume Number 37, Lynne S. Gross, California Advisory Council on Educational Res., January 1968, Available from the California Teachers Association, 1705 Murchison Drive, Burlingame, California, ED 020 681.

This review of the literature endeavors to cover all the experimental and "semi-experimental" research on the effectiveness of educational television.

Instructional Design, Recorded Instruction and Faculty Interests. Supplement, Instructional Design, Recorded Instruction and Faculty Interests Within the University of California. Occasional Paper No. 2, Thomas J. Karwin, Santa Cruz Univ., Calif., Off. of Instructional SVCS, April 1968, EDRS Price MF 50c, HC $3.92, 96p, ED 020 682.

The systems approach to planning is useful in designing more effective and efficient instructional programs. It specifies instructional objectives, coordinates appropriate methods, and evaluates the resulting instructional system.

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If Ordering Hardcopy—

The increase in the price of hardcopy, announced some months ago, is not reflected in the prices shown in this issue of *Now Available*. The microfiche prices are correct, but you should increase hardcopy prices 25% when figuring your order.

Linear Structural Models for Response and Latency Performance in Arithmetic. Psychology Series. Technical Report No. 100. Patrick Suppes and others, Stanford Univ., Calif. Inst. for Math. Studies, July 29, 1966, EDRS Price MF 50c, HC $4.12, 101p, ED 020 683.

A learning model to identify factors contributing to the difficulty of a problem item was supported empirically, and indicated that the number of steps required to solve a problem was the most important variable in predicting both error probability and response latency.

A Computer-Based Laboratory for Automation in School Systems, David G. Ryans and others, System Development Corp., Santa Monica, Calif., March 12, 1962, EDRS Price MF 25c, HC 88c, 20p, ED 020 684.

As the educator faces decisions about new technology, he needs practical research on which to base his decisions. A systems approach to research, rather than a piecemeal one, is highly desirable. Such an approach could employ simulation techniques, which differ from contextual ones primarily in scope and control, and which can deal with a wide range of alternatives, decisions, and interpretations.

Study of Feasibility of New Educational Media for Developing Countries, J. Vaizey, International Inst. for Educational Planning, August 19, 1965, EDRS Price MF 25c, HC 92c, 21p, ED 020 685.

Cost data on the use of the new instructional media are necessary in order to compare different forms of education, to determine the economically optimum rate of technical usage, and to assist administrators. The historical inaccuracy or statistical bias of sources and the incomparability of data pose difficulties in interpretation. interpretation.

Guide to Audiovisual Terminology. Product Information Supplement, Number 6, Gregory Trzebiatowski, Ed., Educational Products Information Exchange Inst., New York, N.Y., February 1968, Available from Educational Products Information Exchange Inst., P.O. Box 2379, Grand Central Station, New York, N.Y. 10017 (free), ED 021 440.

The terms appearing in this glossary have been specifically selected for use by educators from a larger text, which was prepared by the Commission on Definition and Terminology of the Department of Audiovisual Instruction, NEA.

Progress Report: Stanford Program in Computer-Assisted Instruction for the Period January 1, 1968 to March 31, 1968, Stanford Univ., Calif. Inst. for Mathematical Studies in Social Science, 1968, EDRS Price MF 50c, HC $3.44, 84p, ED 021 441.

Computer-assisted instruction was utilized in seven separate programs at Stanford involving children. In the Brentwood Mathematics program, multivariate data analysis for 73 first graders led to identification of factors affecting performance on mathematical problems. In the reading program for first and fourth graders, progress was made in curriculum development, and student behavior was observed and recorded.

Chicago's TV Colleges. Final Report of a Three Year Experiment of the Chicago City Junior College in Offering College Courses for Credit Via Open Circuit Television, Clifford G. Erickson and Hyman M. Chanson, Chicago City College, Ill., August 1960, EDRS Price MF 50c, HC $4.24, 104p, ED 021 442.

From 1956 to 1959, Chicago City Junior College offered courses for credit via open-circuit television. These courses, in the sciences, humanities, social sciences, and languages, attracted an average for-credit enrollment of 1,261 students each semester, two-thirds of them women. The average not-for-credit enrollment each semester was 3,550 students.

The Investigation, Development, and Dissemination of Procedures and Techniques Helpful to Interinstitutional Use of Television and Related Media. Final Report, Duff Browne and Mary Howard Smith, Southern Regional Education Board, Atlanta, Ga., December 1967, EDRS Price MF 50c, HC $3.40, 83p, ED 021 443.

Committees were used to test the hypothesis that interinstitutional co-operation can facilitate more effective use of instructional media in higher education in the South. The principal areas of concern were (1) administrative arrangements for a regional cooperative program, (2) special problems of curriculum inherent in an interinstitutional program, and (3) procedures necessary for establishing high media standards and quality controls for an interinstitutional effort.

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Though enough information is provided here to allow documents to be ordered, the appropriate issues of *Research in Education* contain detailed resumes, and you may wish to check those first. In addition, *Research in Education* lists the documents input by all the other clearinghouses in the ERIC system, and some of those documents are relevant to educational media and technology.

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An Exploratory Analysis of Projection-Standard Variables (screen size, image size, and image contrast) in Terms of Their Effects on the Speed and Accuracy of Discrimination. Final Report, Richard M. Metcalf, Indiana Univ., Bloomington. Audio-Visual Center, August 1967, EDRS Price MF 50c, HC $3.80, 74p, ED 021 444.

Although there has been previous research concerned with image size, brightness, and contrast in projection standards, the work has lacked careful conceptualization. In this study, size was measured in terms of the visual angle subtended by the material, brightness was stated in foot-lamberts, and contrast was defined as the ratio of the difference between the brightness of the background and the object to the brightness of the background.

Computer Science Instruction in Elementary Grades, An Exploration of Computer-Based Learning Methods. Final Report, John A. Starkweather, California Univ., San Francisco, January 1, 1968, EDRS Price MF $1.00, HC $10.05, 199p, ED 021 445.

During the exploratory phase of this two-year project, 234 instructional computer programs were written by 167 junior and senior high school students, instructed as individuals, in small groups, and in whole classes. Then a doctoral study investigated the effectiveness of computer-assisted instruction in the development of problem solving skills.

The Financing of Educational Television Stations, Present Patterns and Recommendations for the Future, Frederick Brieten-

Ethnic Studies Revolutionary? Available Materials Are Listed

By Harold A. Layer

(The following is from a paper commissioned by the clearinghouse, *Ethnic Studies and Audiovisual Media: A Listing and Discussion.* Complimentary copies of this annotated list—for high school and college use—will be available direct from the clearinghouse. Mr. Layer is assistant director of the Audio Visual Center at San Francisco State College.)

Curriculum change and revision for non-white minorities is sweeping the American system of education. The major source of this change is not the teaching faculty who perceive an imbalance or distortion in existing courses, or administrators who have a broad view of the school's role in the community, or instructional technologists with their concern for explicit behavioral objectives. The students themselves are the source.

A vanguard of black students, with the support of other "third world" students and white groups, have chosen the direction of a new curriculum, pushed for its implementation, and are now trying to maintain an influence on its evolving structure and content. Educational media producers and those in charge of school media centers should be fully aware of what is really happening if they are to be at all creative and responsive in their respective roles.

The general label for this new curriculum is "Ethnic Studies." To many educators, the demand —as they understand it—for ethnic courses is quite legitimate. They predict that black history, for example, will explore the role of the Negro in this country's history and correct the neglect and distortions of existing courses. They see the goal of ethnic social sciences as an intellectual examination of the psychological and sociological ramifications of ghetto life, poverty conditions, and mixed ethnic groups. They see ethnic arts and humanities as a collection of courses whose goals will be to recapture and strengthen the "Old World" cultural roots of the non-white minorities, establish pride and respect for these roots, and develop a deeper appreciation of cultural differences as reflected in art, music, and literature.

Some observers, on the other hand, feel that "Ethnic Studies" is a code name for "Revolutionary Studies." They have noted the high correlation between students actively working for ethnic programs and those supporting Che Guevara's and Mao's political and economic philosophies. They are afraid young students in these new programs

Ethnic Studies, Cont.—

will add their minds and bodies to the growing army of militant dissidents.

To the extent that non-white minorities actually are oppressed in this country and are forced to live in segregated, impoverished ghettos which are owned, controlled, and patrolled by the "racist establishment," then the total curriculum of Ethnic Studies will certainly be more than a scholarly re-examination of the past. It also will critically examine the present. And to the extent that concerned students have a voice in determining its content, it also will examine alternative means of eliminating inequities and injustices—means by which the powerless can obtain power.

This is the "revolutionary" aspect of Ethnic Studies which disturbs those who want higher education to remain intellectually detached. For it may prove true that both a radical restructuring of our political and economic institutions and a "Cultural Revolution" in the minds of citizens are necessary to solve the problems. Many articles and books explore this possibility, but few media producers have touched it.

The desire for the curriculum to be detached rather than involved in change, is inconsistent. If it is acceptable for higher education to be involved in facilitating the *technological* change of society towards specified—and sometimes controversial—goals, why not involvement with *social* and *economic* goals?

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feld, Jr., National Association of Educational Broadcasters, Washington, D.C., 1965, EDRS Price MF 75c, HC $9.70, 192p, ED 021 446.

This information on financing educational television stations comes from a structured questionnaire answered by all ETV stations in the U.S. and from a conference of national educational broadcast leaders.

Teaching Machines and Programmed Instruction; An Introduction, Edward B. Fry, 1963, Available from McGraw-Hill Book Company, Inc., New York, N.Y. ($6.50), ED 021 447.

Teaching machines and programed instruction represent new methods in education, but they are based on teaching principles established before the development of media technology. Today programed learning materials based on the new technology enjoy increasing popularity for several reasons: they apply sound psychological theories; the materials can easily be fitted into existing instructional programs, supplementing or replacing teachers; and almost all subjects can be programed.

Teacher and Technology, New Designs for Learning, William Clark Trow, 1963, Available from Appleton-Century-Crofts, Meredith Publishing Co., 34 West 33rd St., New York, N.Y. ($1.95, 198p), ED 021 448.

Technological devices present a challenge that educators cannot afford to ignore. Properly incorporated into a controlled environment, these tools need not bring about any dehumanization of the schools.

Television in Education and Training: A Review of Developments and Applications of Television and Other Modern Audio-Visual Aids, D. A. DeKorte, 1967, Available from N. V. Philips' Gloeilampenfabrieken, Eindhoven, The Netherlands ($4.92, 213p), ED 021 449.

Although television and other audiovisual aids have proven to be valuable educational tools when intelligently employed, teachers in many countries fail to understand the usefulness of these aids. A review of developments in the U.S., France, Italy, the Netherlands, and Great Britain shows that many successful courses have been given on both closed-circuit and broadcast television at all levels of education.

Inventing Education for the Future, Werner Z. Hirsch and others, 1967, Available from Science Research Associates, Inc., 259 East Erie St., Chicago, Ill. 60611 ($7.95, 353p), ED 021 450.

Educational enterprise must keep pace with the rest of society. Unfortunately, one by-product of the rich tradition in this field is enough inertia to make education cumbersome and slow to respond to a changing environment.

An Experimental Comparison of An Intrinsically Programed Text and a Narrative Text, R. J. Senter and others, Aerospace Medical Research Labs, Wright-Patterson AFB, Ohio; Cincinnati Univ., Ohio, March 1966, Available from Clearinghouse for Federal Scientific & Technical Information, Springfield, Va. 22151 (AD-635 001, MF 50c, HC $2.00), ED 021 451.

The study compared three methods of instruction in binary and octal arithmetic, i.e., (1) Norman Crowder's branched programed text, "The Arithmetic of Computers," (2) another version of this text modified so that subjects could not see the instructional material while answering "branching" questions, and (3) a narrative text version presenting the same content material.

Training Corrective Maintenance Performance on Electronic Equipment with CAI Terminals: I. A Feasibility Study, Joseph W. Rigney, University of Southern California, Los Angeles, Dept. of Psychology, December 1966, Available from Clearinghouse for Federal Scientific & Technical Information, Springfield, Va. 22151 (AD-646 651, MF 65c, HC $3.00, 41p), ED 021 452.

A report is given of a feasibility study in which several possible relationships between student, computer terminal, and electronic equipment were considered. The simplest of these configurations was set up and examined in terms of its feasibility for teaching the performance of fault localization on a Navy transceiver.

Development and Experimental Evaluation of an Automated Multi-Media Course on Transistors, J. H. Whitted, Jr. and others, Aerospace Medical Research Labs, Wright-Patterson AFB, Ohio; Radio Corp. of America, Camden, N.J. Educational Television, September 1966, Available from Clearinghouse for Federal Scientific & Technical Information, Springfield, Va. 22151 (AD-646 671, MF 65c, HC $3.00, 114p), ED 021 453.

A completely automated multi-media self-study program for teaching a portion of electronic solid-state fundamentals was developed. The subject matter areas included were fundamental theory of transistors, transistor amplifier fundamentals, and simple mathematical analysis of transistors including equivalent circuits, parameters, and characteristic curves.

Programmed Instruction and Teaching Machines in the Field of Medical Education: An Annotated Bibliography, Laura A. Rey-

* * *

This bulletin is distributed pursuant to a contract with the Office of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official Office of Education position or policy.

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List of Films Recommended for Children and Adolescents Up to 16 Years Following Selections Made in Twenty-Two Countries. Reports and Papers on Mass Communication, Number 19, Jean-Pierre Barrot and Ginette Billard, United Nations Educational, Scientific, and Cultural Organization, Paris (France), 1956, EDRS Price MF 50c, HC $6.10, 120p, ED 022 375.

This is a list of films suitable for children and adolescents up to the age of 16, compiled from lists sent in by 22 countries and in accordance with the recommendations of the conference on the exhibition and distribution of films for children and adolescents, under the patronage of UNESCO.

Innovation in Education: New Directions for the American School. A Statement on National Policy, Committee for Economic Development, New York, N.Y. Research and Policy Committee, July 1968, Available from Distribution Division, Committee for Economic Development, 477 Madison Ave., New York, N.Y. 10022 ($1.00). EDRS Price MF 50c, HC $4.40, 86p, ED 022 376.

The goals of instruction must be continually re-examined and revised in light of changing conditions and new possibilities. Educational equipment and new methods in themselves may influence these goals. To stimulate change a national Commission on Research, Innovation, and Evaluation in Education is recommended. Memoranda of comment, reservation, and dissent are appended.

Practical Programming, Peter Pipe, September 1966, Available from Holt, Rinehart and Winston, Inc., New York, N.Y. ($1.95, 70p), ED 022 377.

Descriptors: Branching, Linear Programing, Material Development, Multiple Choice Tests, Programed Instruction, Reinforcement, Teaching Machines.

Application and Operation of Audiovisual Equipment in Education, Fred John Pula, 1968, Available from John Wiley & Sons, Inc., 605 Third Ave., New York, N.Y. ($7.95, 360p), ED 022 378.

Effective utilization of audiovisual materials and equipment depends on adequate preparation of the teacher in operating equipment and in coordinating audiovisual experiences with general teaching objectives. Descriptions and operating instructions are given for each type of equipment.

New Communications Technology and Its Relationship to Instruction, John P. Witherspoon, October 1966, Paper prepared for The Feasibility Study of Inter-Institutional Television, University of Minnesota, Minneapolis, EDRS Price MF 25c, HC $1.40, 26p, ED 022 379.

The State of Minnesota is contemplating the establishment of a microwave system to transmit television signals between its institutions of higher learning. Factors to be considered in planning this educational interconnection system relate to the planning of similar systems and networks of systems by other aggregations of states, universities, and organizations.

Film Guide for Music Educators, Donald J. Shetler, Music Educators National Conference, Washington, D.C., 1968, Available from Music Educators National Conference, A Department of the National Education Assn., 1201 16th St., N.W., Washington, D.C. 20036 ($2.50).

EDRS Price MF 50c, HC Not Available from EDRS, 93p, ED 022 380.

The music oriented films and filmstrips in this catalog were produced for use on instructional, educational, or commercial television, or were designed to be used in a specific area and at a specific level of music teaching.

Use of CTSS in a Teaching Environment, Daniel Roos, Massachusetts Inst. of Tech., Cambridge, November 1964, Available from Clearinghouse for Federal Scientific and Technical Information, Springfield, Va. 22151 (AD-661-807, MF 65c, HC $3.00, 32p), ED 022 381.

Descriptors: Computer Assisted Instruction, Computers, Computer Science Education, Educational Experiments, Equipment Evaluation.

Computer time-sharing offers many interesting possibilities for use in teaching computer technology. To test the hypothesis that with proper hardware and software, students using time-sharing as a teaching machine could acquire proficiency in the fundamentals of programing more easily than by using standard batch-processing techniques, the Department of Civil Engineering at M.I.T. conducted a study using a freshman programing class.

ERIC Emerges As Up-And-Running System

Over 25,000 documents were collected by ERIC in 1968 from hundreds of sources, according to Lee G. Burchinal, Director of the Division of Information Technology and Dissemination, U.S. Office of Education. About half have appeared or will appear in *Research in Education,* ERIC's monthly bulletin. The others have been screened out or kept in local files of the clearinghouses.

Research in Education expanded from 67 reports announced in the first issue, November, 1966, to 913 reports cited in the January 1969 issue.

The total ERIC collection grew to 17,341 screened documents by the end of 1968. Included were 11,161 reports announced in *Research in Education* from its inception through December, 1968, and 6,180 documents included in the 6 special document collections published through ERIC, like "Selected Documents on the Disadvantaged" or "Pacesetters in Innovation, 1967."

Research in Education has enjoyed a consistent increase in numbers of subscribers: up from 209 in January, 1967, to 4,422 in December 1968. Institutions of higher education accounted for almost 35% of the subscriptions, while state and local educational agencies placed 32% of the orders. Other subscriptions were from individuals, foreign purchasers, and commercial or nonprofit organizations. Subscriptions came from all states and 39 foreign countries.

On-site uses of ERIC materials and local files are becoming common daily occurrences at ERIC clearinghouses. Visits last from several hours to days, weeks, and in several cases, to an academic quarter or semester. Educators using clearinghouse facilities come from all parts of the United States and from many foreign countries.

During 1968, the clearinghouses received and answered over 30,000 requests from educators for information on specific topics. About 30% of these requests came from teachers or other educational practitioners, 19% from educational decision-makers, 13% from dissemination or information specialists, and 11% from R&D specialists. The other 27% came from a variety of persons, including staff of professional organizations, students and parents.

Computer-Assisted Explanation: A Guide to Explaining: And Some Ways of Using a Computer to Assist in Clear Explanation, Edmund C. Berkeley, Information International, Inc., Cambridge, Mass., May 1967, Available from Clearinghouse for Federal Scientific & Technical Information, Springfield, Va. 22151 (AD-655 915, MF 65c, HC $3.00, 280p), ED 022 382.

The concept of "explanation" is the focus of this study and of the working computer programs contained in it. The advent of the computer makes it possible to bring to bear on the art of explanation a vast information handling power.

Investigations in Computer-Aided Instruction and Computer-Aided Controls. Final Report, R. C. Rosenberg and others, Massachusetts Inst. of Tech., Cambridge. Dept. of Mechanical Engineering, April 1967, Available from Clearinghouse for Federal Scientific & Technical Information, Springfield, Va. 22151 (AD-655 374, MF 65c, HC $3.00, 26p), ED 022 383.

These research projects, designed to delve into certain relationships between humans and computers, are focused on computer-assisted instruction and on man-computer interaction.

Experiments in Computer-Aided Inductive Reasoning, J. R. Newman and M. S. Rogers, System Development Corp., Santa Monica, Calif., December 6, 1966, Available from Clearinghouse for Federal Scientific & Technical Information, Springfield, Va. 22151 (AD 645 422, MF 65c, HC $3.00, 78p), ED 022 384.

This research is concerned with human problem-solving behavior that involves inductive reasoning or concept formation when that behavior is being assisted by certain computer and display aids (called symbol manipulation functions).

Educational Electronics: A Presentation of the PE Group and Its Work, Gunnar Markesjoe, Stockholm School of Education (Sweden). Inst. of Educational Psychology, July 1968, EDRS Price MF 25c, HC $1.25, 23p, ED 022 385.

Several methods have been tried (slide projectors, film, and television), and some, such as computers and various combinations of computers and other media, have yet to be evaluated. The most successful and economical device has proven to be a system with four projectors for still pictures, in which the pictures are triggered by impulses from the second channel of a tape recorder, and the accompanying sound is recorded on the first channel of the tape.

Instructional Media and Heuristic Learning. Final Report, Henry W. Ray, Centennial School District, Warminster, Pa., December 1966, EDRS Price MF 25c, HC $2.05, 39p, ED 023 291.

Educational experiences can be designed and materials produced which enable children to discover things for themselves and learn more actively. The project has received positive support from teachers of normal and slow-learning children.

Keep Those Cards and Letters And Newsletters Coming?

Those of you who have regularly received issues of *Now Available* but who have not received a copy of an ERIC at Stanford *Newsletter* for a long time are hereby, hopefully, reassured. There has not been a newsletter for a long time. To be specific, there has not been one since *Newsletter 2*, which had a yellow flower on it.

Rather than putting out newsletters, we have been trying to make *Now Available* more interesting and readable. (We admit it--there was room for improvement. And when we think we've improved, we'll put a yellow flower in *Now Available*. Or maybe an orange one.)

The Covariation of Achievement and Attitude Throughout a Learning Experience. Phase III, The Relationship of New Educational Media to Non-Intellective Factors in Learning. Final Report, Charles O. Neidt, Colorado State Univ., Ft. Collins, August 1967, EDRS Price MF 75c, HC $8.25, 163p, ED 023 292.

Introductory psychology students were subjects in an investigation to determine the covariation among achievement, attitudes toward a course, and attitudes taught as part of a course.

The Language Laboratory and Modern Language Teaching. Revised Edition, Edward M. Stack, 1966, Available from Oxford University Press, 1600 Pollitt Drive, Fair Lawn, N.J. 07410 ($4.50, 234p), ED 023 293.

Since the audiolingual forms of a foreign language must be controlled before the graphic skills are taught, exercises in a language laboratory ought to precede written exercises.

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This is a sample (four pages from a total of eight) of an ERIC bulletin, distributed free to all those on our mailing list. To people in the United States, in England, in Hong Kong and to people in some rather out-of-the-way places. It is an example of one of the services we provide. We monitor the research literature and cite it—in bulletins like this one—to keep our clientele up to date. Another service is to make documents available in inexpensive format—microfiche—which otherwise could not be obtained at all.

And we commission bibliographies and state of the art papers, limited numbers of which we are able to distribute free. Recent examples are "Media and the Disadvantaged" by Serena E. Wade and "Costs of Educational Media Systems" by Michael G. Sovereign.

Unlike many exhibitors at the National Audio-Visual Aids Conference and NavEx69, we have no apparatus to sell. But we would like to promote an idea:

Let us send you more information on our U.S. Government-sponsored system, and perhaps even put you on the mailing list. Then you may want to share your own innovative ideas with others around the world, by submitting them to the clearinghouse.

(Typical American hard sell, what? We hope you don't think so. We look on the proposal as something of a good bargain for both sides.) Our address is as given above, in black. Just put USA after California.

Inside: Report from Lee Burchinal, and an Invitation To See Dialog System.

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"Educational Television–A Non-Commercial Viewpoint," Eugene N. Aleinikoff, New York City, *Educational Broadcasting Review*, 1969, 3, 2, April, 25-33.

Copyright revision problems resulting from conflicting interests of commercial media versus non-commercial educational television are hampering ETV's intended effectiveness. The hope is that by late 1969 an acceptable copyright revision can be agreed upon in Congress.

"What Media Do Teachers Really Want?," J. Robert McAdam, Sacramento State College, *Educational Screen and Audiovisual Guide*, 1969, 48, 3, March, 18-19.

To help northern California schools establish more effective and efficient means of utilizing instructional materials and media, a survey was conducted in fifteen counties to discover what problems are encountered in securing materials, what materials would be purchased if funds were available, and what subject matter topics most needed new materials.

"Cassettes: A Revolution Waiting to Happen," Noel F. McInnis, Kendall College, Evanston, Illinois, *Educational Screen and Audiovisual Guide*, 1969, 48, 3, March, 14-17.

Though the potential of the cassette recorder is yet to be generally recognized as a valuable educational medium, many new advantages and applications have been discovered which make this a particularly useful instrument for positive instructional use.

"Market Review: Nontheatrical Film and Audiovisual-1967," Thomas W. Hope, Rochester, New York, *Audiovisual Instruction* 1969, 14, 3, March, 74-84.

From 1956-1967, an exhaustive year-by-year study was conducted to reveal various financial and statistical developments of the non-theatrical and audiovisual fields. A discussion of products and markets useful in the field of education is illustrated with detailed tables and charts.

"Super 8, Industry, and the Schools," Sam C. Gale, Washington, D.C., *Audiovisual Instruction*, 1969, 14, 3, March, 70-72.

In today's accelerated society with much emphasis on audio-visual programs, there is increased awareness of Super 8 as a new medium as well as the growing cooperation of industry and education to increase film usage in the classroom.

"The Hourglass Instead of the Funnel in Educational Technology," E.E. Zajac, Murray Hill, New Jersey, *Educational Technology*, 1969, 9, 2, February, 28-29.

Instead of the current trend in educational film-making to involve many specialists at high cost in film "projects," the industry should encourage professors to make inexpensive films, hereby creating a wide base of ideas from which to choose the most promising for professional treatment.

"Empirical Evaluation of Instructional Materials," Robert B. McIntyre and Calvin C. Nelson, University of Southern California and California State College, Fullerton, *Educational Technology*, 1969, 9, 2, February, 24-27.

A two-step approach in evaluating materials for general and special education involves (1) adoption of the best of each kind of existing evaluation instrument for immediate use as an interim, low-level evaluation and (2) a field-based procedure for comparing the reactions of users of material with existing evaluation models to provide a basis of developing a more detailed evaluation procedure.

"Some Hows and Whys of Visual Literacy," John L. Debes, Rochester, New York, *Educational Screen and Audiovisual Guide*, 1969, 48, 1, January, 14-15.

Teaching visual literacy advances the child's awareness of language, improves his capacity for ordering ideas, increases his awareness of non-verbal communication, and helps him to realize his own value.

Alpha Chi Omega Toy Book, Alpha Chi Omega Fraternity, Indianapolis, Ind., EDRS Price MF 25 cents, HC $2.15, 41p, ED 023 219.

Patterns and directions are given for making 38 self-help toys for cerebral palsied and other handicapped children.

Games as Vehicles for Social Theory, James S. Coleman, Office of Education, Washington, D.C., May 1968, EDRS Price MF 25 cents, HC $1.20, 22p, ED 023 145.

The relation of games to life in general is discussed, with the suggestion that games constitute an excursion or "time out" from goal-directed activities in life, in which an alternative set of rules are established for a delimited period.

Analyzing Verbal and Nonverbal Classroom Communications, Herbert K. Heger, 1968, EDRS Price MF 25 cents, HC 70 cents, ED 025 483.

The Miniaturized Interaction Analysis System (Mini-TIA) was developed to permit improved analysis of classroom communication in conjunction with video taping. Preliminary work with Mini-TIA has demonstrated that the system is functional and effective in focusing the attention of education students on key behaviors. Also, Mini-TIA permits statistical computation of observational data.

Nonverbal Communication: A Needed Focus, Charles Galloway, 1968, EDRS Price MF 25 cents, HC 90 cents, 16p, ED 025 484.

Greater awareness of nonverbal communication plus greater awareness of student behavior is necessary on the part of the teacher. In training teachers, feedback on nonverbal behavior may be provided through awareness of student reaction and response, observational data, or video tape analysis.

The Role of Programed Instruction in Company Training and Development Programs, Trezzie Abram Pressley, Arkansas Univ., Fayetteville, 1966, Available from University Microfilms, 300 Zeeb Rd., Ann Arbor, Michigan 48106, Order No. 66-7059, MF $3.00, Xerography $8.80, 195p, ED 023 035.

Data were obtained from responses received from 104 companies which were using programed instruction in their training

programs and from 176 employees within these companies. Companies of all sizes were using programed instruction; however, the vast majority had used programed materials with one-half or less of their employees. Almost 3/4 of the companies were using the method in training new workers and almost half were using it in retraining the work force in new job areas.

Message Design: The Temporal Dimension of Message Structure. Final Report, Malcolm L. Fleming and others, Indiana Univ., Bloomington. Audio-Visual Center; Indiana Univ., Bloomington. Div. of Educational Media, March 1968, EDRS Price MF 50c, HC $5.95, 117p, ED 023 294.

Since structural dimensions of knowledge and learner contribute to preferred message structure, an understanding of structural relationships can aid in the more effective design of instructional messages. Five studies were conducted to explore these relationships.

Aptitudes and Instructional Media. Project on Individual Differences in Learning Ability as a Function of Instructional Variables. Technical Report Number 3, Richard E. Snow and Gavriel Salomon, Stanford Univ., Calif. School of Education, May 1968, EDRS Price MF 25c, HC $1.50, 28p, ED 023 295.

Little is known about the teaching effectiveness of instructional media, particularly film and television. Accumulated research evidence applies to a generalized "average student," and thus to no one. An alternative approach would consider aptitude interactions with media variables, thus pointing up appropriate treatments for different kinds of students.

Diagnosis of Pupil Achievement in the Individually Prescribed Instruction Project. Working Paper 15, Richard C. Cox and M. Elizabeth Boston, Pittsburgh Univ., Pa. Learning Research and Development Center, November 1967, EDRS Price MF 25c, HC $2.15, 41p, ED 023 296.

Diagnostic instruments of the Individually Prescribed Instruction (IPI) Program measure pupil achievement in the IPI learning continuum. The IPI system employs the instructional unit to define progress in mathematics, reading and science.

The Effects of Shifting Medium of Expression on The Use of Concepts among Children, Donald Ross Green and Nancy E. Wilder, California Test Bureau, Monterey; Emory Univ., Atlanta, Ga. Div. of Teacher Education, 1968, EDRS Price MF 50c, HC $5.65, 111p, ED 023 297.

The results of an earlier study had indicated that shifting from one form or "code" of expression to another inhibits a student's ability to express a concept explaining a physical change (cause-effect relationship) but does not inhibit his description of that change. Three sets of demonstrations were developed and were presented on three different days to 289 advanced fourth graders. Both the mean R-S difference score and a regression analysis favor repetition over shifting for correct concept expression.

Modular Audio-Visual Multimedia Programming Concept; Electronic Blueprint Reading. Study Report 1, Arthur M. Suchesk, North American Aviation, Inc., Anaheim, Calif., 1965, EDRS Price MF 25c, HC $1.65, 31p, ED 023 298.

The concept of Modular Audiovisual Multimedia Programing, which is generally applicable to meeting the need for automated mass training, has been implemented in an electronic blueprint reading course for industrial employees.

An Independent Learning Approach to Piano Sight Reading, Claudette Sorel and Robert M. Diamond, State Univ. of New York, Fredonia. Coll. at Fredonia, March 1968, EDRS Price MF 25c, HC $1.25, 23p, ED 023 299.

Descriptors: Applied Music, Audiovisual Aids, Audiovisual Instruction, Autoinstructional Methods, College Curriculum, Individual Instruction, Music Education, Music Reading, Projection Equipment, Slides, Teaching Methods.

An independent learning approach based on tachistoscopic speed reading techniques (i.e. controlled exposure) was evaluated for reducing sight reading errors among college piano students.

Technical Report on Tele-Communications, San Mateo County PACE Center, Redwood City, Calif., May 1968, EDRS Price MF 50c, HC $4.00, 78p, ED 023 300.

To provide background material for those interested in telecommunication in education and for those planning to implement such programs in their schools, a research study was conducted to gather information from a variety of sources including educational and technical experts, conference participation, visits to schools conducting projects, and the recent literature in the field.

Pilot Studies of Principles of Programing. Comparative Studies of Principles for Programing Mathematics in Automated Instruction, Lawrence M. Stolurow and others, Illinois Univ., Urbana, July 1964, EDRS Price MF 50c, HC $3.30, 64p, ED 023 301.

High school students took part in a series of pilot studies on the variables involved in step size and sequencing in programed instruction.

Use of Copyrighted Material for Instruction Through Inter-Institutional Distribution by the Television, Fred S. Siebert, Minnesota Univ., Minneapolis. Inter-Institutional Television, October 1966, EDRS Price MF 25c, HC 95c, 17p, ED 023 302.

Descriptors: Educational Television, Federal Laws, Federal Legislation, Instructional Materials, Instructional Television, Interinstitutional Cooperation, Program Content, Publication, Ad Hoc Committee on Copyright Revision.

The Relationship of Elementary and Secondary Education to a State Communications Network Serving Higher Education, Chester D. Babcock, Minnesota Univ., Minneapolis, Inter-Institutional Television, October 1966, EDRS Price MF 25c, HC $1.25, 23p, ED 023 303.

In using ETV, the schools must understand the community's educational expectations. Administration should be through state ETV commissions which are able to represent the needs of elementary schools, high schools, colleges, and the community at large.

Federal-State Relationships, John Bystrom, Minnesota Univ., Minneapolis, Inter-Institutional Television, December 1966, EDRS Price MF 25c, HC $2.25, 43p, ED 023 304.

Descriptors: Broadcast Industry, Communication Satellites, Educational Facilities, Radio, Television, Facility Expansion, Federal Programs, Inservice Programs, Interagency Cooperation, Interinstitutional Cooperation, Media Research, Networks.

The Content, Objectives, Measuring Instruments, and Validation Studies of "Programing is a Process: An Introduction to Instructional Technology"; A Programed Film. Technical Manual, Susan M. Markle and Philip W. Tiemann, Illinois Univ., Chicago Circle, 1967, Available from Office of Instructional Resources, Illinois Univ., Chicago Circle, Chicago, Ill., 25p, ED 023 305.

Descriptors: Instructional Technology, Program Development, Programed Instruction, Selection, Teaching Procedures.

Movies with a Purpose: A Teacher's Guide to Planning and Producing Super 8 Movies for Classroom Use, Eastman Kodak Co., Rochester, N.Y., EDRS Price MF 25c, HC $1.50, 28p, ED 023 306.

Teachers can improve classroom procedure by producing and showing their own 8mm films, while building a library of effective teaching aids. These motion pictures are conceived as intrinsic parts of a teaching plan, and are designed to explain a single idea or concept.

A Programed Biology Laboratory for the Non-Science Major, Robert M. Diamond, State Univ. of New York, Fredonia. Coll. at Fredonia, June 1968. EDRS Price MF 25c, HC $2.55, 49p, ED 023 307.

Among many conclusions were these: sequences reached prestated objectives for non-science majors; a laboratory station can

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TYPECAST FOR THE PART, clearinghouse worker Leonard Schwarz recently starred in a film in which he does nothing but hammer, kick, and punch a Bobo doll while uttering such classic lines as "Sockeroo." The film is being used by psychologist Albert Bandura in an experiment to explore the tendency of children to imitate the violent behavior of others. Schwarz's more-permanent role is supervising the clearinghouse periodical collection and processing articles for *Current Index to Journals in Education.*

serve at least 16-18 students during a 40-hour week; time for sequence completion varies, and new objectives may be added to such a course.

Programed Art in the Elementary and Secondary Schools, Robert M. Diamond and Marlene H. Lindquist, State Univ. of New York, Fredonia. Coll. at Fredonia, May 1968, EDRS Price MF 25c, HC $2.20, 42p, ED 023 308.

A study was undertaken to develop and evaluate a series of self-instructional, programed art sequences for the upper elementary through high school levels.

A Correlational Analysis of the Effects of Learner and Linear Programming Characteristics on Learning Programmed Instruction. Final Report, Warren F. Seibert and Christopher J. Reid, Purdue Univ., Lafayette, Ind. Audio Visual Center, May 1968, EDRS Price MF 25c, HC $2.40, 46p, ED 023 309.

Learning and retention may be influenced by subtle instructional stimulus characteristics and certain visual memory aptitudes. Ten stimulus characteristics were chosen for study.

An Analysis of University Policy Statements on Instructional Recordings and their Re-Use. An Occasional Paper from ERIC at Stanford, Fred S. Siebert, Stanford Univ., Calif. ERIC Clearinghouse on Educational Media and Technology, 1968, EDRS Price MF 25c, HC 60c, 10p, ED 023 310.

The frequently recurring provisions, to be found in the policy statements of a selected group of 20 colleges and universities, concerning the production, use, and re-use of instructional recordings (visual and oral) can be divided for the purposes of analysis and comparison into four groups: ownership and copyright provisions, faculty rights, faculty compensation, and administration and review of policies.

Teaching Algebra to Ninth and Tenth Grade Pupils with the Use of Programmed Materials and Teaching Machines, Roger A. Raymond, Sioux Falls Public Schools, S. Dak., October 1964, EDRS Price MF 50c, HC $3.70, 72p, ED 023 311.

It is recommended that programed materials be used to strengthen advanced curricula and to teach students with a record of absence. Further studies on programed materials in textbook form rather than teaching machine format should be conducted.

Teaching Algebra to Ninth and Tenth Grade Pupils with the Use of Programmed Materials and Teaching Machines. Roger A. Raymond, Sioux Falls Public Schools, S. Dak., October 1963, EDRS Price MF 50c, HC $4.65, 91p. ED 023 312.

Teachers commented on persistent boredom, the need for practice materials to supplement the programed information, and the advantage of individual work rates and self-help. Students felt a need for textbooks and teacher contact.

Television Linguistics Program. 1967 Report, Leonard E. Glassner, Pittsburgh Public Schools, Pa., 1967, EDRS Price MF 50c, HC $3.70, 72p, ED 023 313.

The program teaches contemporary English grammar through principles of linguistic science to 12,000 students in Pittsburgh. Structural grammar is presented to eighth and ninth grade students, and transformational grammar to tenth graders.

The Use of Video-Tape Recording and Micro-Teaching Techniques to Improve Instruction on the Higher Education Level, Arye Perlberg and David C. O'Bryant, Illinois Univ., Urbana. Dept. of General Engineering, August 1968, EDRS Price MF 25c, HC $2.05, 39p, ED 023 314.

Recommendations are that to reduce faculty anxiety, no administrative use should be made of the tapes without consent; that use of one-inch tape should be continued; and that taping and teaching activities should be coordinated. A list of equipment and a taping schedule are included.

Television in Higher Education; Psychology: A Special Report from the National Center for School and College Television. NCSCT News Supplement, Number 9, Fillmore H. Sanford, Nation-

Seminars Scheduled on Information Centers

Ten 3-day seminars on educational information centers will be conducted by System Development Corporation for designated regions across the country. Supported by the U.S. Office of Education, the seminars will bring together operational personnel from organizations in each region that are involved in the creation or collection, organization, and dissemination of educational information.

The seminars will run from October 1969 through March 1970, in Minneapolis, New York City, Washington, D.C., Chicago, Atlanta, San Francisco, Los Angeles, Dallas, Denver, and Boston. They will provide a forum for center personnel from each particular region to discuss common areas of concern and to exchange information.

Seminar leaders and guest speakers will be drawn from among the leaders in the educational information center community and related areas of experience. Personnel selected to attend should be able to participate as representatives of their centers in discussions on various aspects of the educational information center, e.g., acquiring and creating information, disseminating educational information, organizing a collection (documents and audio-visual materials), and serving the educator-user. Those attending will bear the cost of travel, lodging, and food.

Additional information and applications are available from System Development Corporation, Attention: Mr. C. Neil Sherman, 5720 Columbia Pike, Falls Church, Virginia 22041.

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al Center for School and Coll. Television, Bloomington, Ind., 1968, EDRS Price MF 25c, HC 85c, 15p, ED 023 315.

At a two-day meeting sponsored by the National Center for School and College Television and by the American Psychological Association, 15 specialists viewed and reacted to recorded television materials currently used in psychology instruction. Programs were at their best, they agreed, when they presented actual research in progress or involved interactions between people.

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Effectiveness of the Observing Response With Programed Pictorial Stimuli as a Function of Interstimulus Interval, Overtness and Correctness of Response, Final Report, Harvey B. Black, Indiana Univ., Bloomington, March 1968, EDRS Price MF 50c, HC $5.05, 99p, ED 024 259.

The comparative efficacy of overt and non-overt practice responses in programed instruction was investigated under a variety of practice and test conditions, using a paired associate learning task.

Specification for Teaching Machines and Programmes (Interchangeability of Programmes), Part 1, Linear Machines and Programmes, British Standards Institution, London, 1967, EDRS Price MF 25c, HC 80c, ED 024 260.

To promote interchangeability of teaching machines and programs, so that the user is not so limited in his choice of programs, these standards were offered.

Some Questions and One Answer: The Medium is Just the Medium

By Henry C. Alter

Director, Educational Services
National Educational Television

Sooner or later, anyone thinking about television and society must confront Dr. Herbert Marshall McLuhan and his many dicta about media, of which the most famous is "the medium is the message." McLuhan also talks about our present "postliterate" world and predicts the eventual end of writing and print in human communication. It is not within the scope of these remarks to engage in extended analysis of McLuhan's arguments. This is being done by others and will no doubt continue to be done for some time to come.

It is necessary, however, to remove McLuhanism as a stumbling block to the consideration of television's role and function as an instrument of present-day literacy and cultural awareness. I propose to do this by suggesting a *motive* on McLuhan's part which impels him in the direction he has taken.

To me the conclusion is inescapable that he is motivated by a deep, *personal* anxiety about the phenomena he describes, an anxiety rooted in some clearly disturbing evidence, and exacerbated by pessimism as to our ability to handle and absorb what is taking place. This is not said in derogation. Men of such sensitivity are a much-needed counterforce to the indolent, the opportunists, the greedy that make up the majority. But men of such sensitivity are prone to overstate their case, they are apt to underrate the capacity of the social organism for change, for adaptation, for survival. They are likely to call forth reaction so drastic as to be self-defeating. In this respect they are reminiscent of Karl Marx, whose sensitive and essentially accurate perception of an earlier technological revolution led him to the advocacy of irrational remedies, coupled with the promise of yet another unattainable utopia. His teachings proved almost fatally divisive while in actuality both his supporters and detractors were able to adjust and absorb the real problems which gave rise to his over-reactive teachings.

It must be acknowledged that McLuhan is not, strictly speaking, a reformer or an advocate.

These comments on McLuhanism are reprinted, with permission, from John Ohliger's Mass Media/Adult Education newsletter.

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Alter on McLuhan, Cont.—

Having prudently eschewed value judgments, he seems merely to be telling us "what's happening, baby." But this is a superficial difference. For if, as he certainly does, McLuhan predicts a non-literate future in which the pervasive and ubiquitous existence of electronic media will become more significant and consequential than any and all substance conveyed by such media, then he is obviously stipulating a world which few people now living would recognize or could endure. Therefore, whether he advocates it or not, he is a prophet of an era about which others may make value judgments. We must hope that this value judgment has been made, and the non-literate, non-value-oriented world rejected as a monstrosity.

The value of teachers such as McLuhan lies meanwhile in the warning signals they raise. For those who would disregard as long as possible all evidence of change and of new influences are clearly in command. Change—continuous, and responsible, but withal quite fundamental, is occurring. Without the McLuhans in our midst, we might be easy victims of those entrenched interests for whom business as usual (or better, business-as yesterday) is the easiest, and indeed for the short term the most profitable, response.

We thus return to a provisional rejection of "the medium is the message," and some reasons for that rejection.

Taken at face value as a slogan, the statement is fairly bland and unobjectionable. If it merely means that the medium is very evident, that it is a force in our lives, that it affects us (to a degree) simply because it exists—we can register it as colorful language, somewhat simplified, but not inappropriate.

Taken literally, however, "the medium is the message" means that what is said or how it is said is irrelevant, or will soon be. This is untrue, and the untruth is not difficult to prove.

If the medium is the message, why is it that in our country it is business, in some countries part-business and part subsidized culture, and in still other countries the property and voice of the government?

If the medium is the message, why is it that 50 million Americans watch Red Skelton, 12 million CBS Reports, and perhaps 3 million NET Playhouse?

If the medium is the message, why are some shows commercially successful and others failures? Why, demonstrably and regrettably, do *millions* of viewers tune away from the Ed Sullivan Show when an opera aria is presented?

If the medium is the message, why do Congressmen fear "editorializing" by educational stations?

If the medium is the message, why were people in Israel watching Arab stations years before Israel had television, and why are more people in strongly anti-communist West Berlin watching movies from East Berlin than their own two channels?

McLuhanites may reply, "But they all *are* watching," and they are right. More than that, they could argue, and we would do well to agree, that if Russians know how Americans live, and vice versa, this is due to television more than to any other cause. The question is—is that the medium? Or is that the message?

To me, the answer is obvious, and it isn't McLuhan. The medium is just that—a medium through which people communicate messages. A tremendous, world-wide effort is going on to make the message effective from the point of view of the communicator. At the same time, a debate goes on all the time, world-wide, and also within national boundaries. This debate is never about the medium—no one argues that it should or shouldn't exist. No one seriously tries to muffle it, only a handful think they can censor it. Yet the debate goes on, and it's all about what the message should be, and how more and more people can be reached by it.

The message is totally different on the screens of Moscow, Cairo, Bonn, or Boston, but it *is* getting through. It will continue to be different. And it will increasingly get through. There will be many consequences of this. But the one consequence it is impossible to conceive is the state of affairs implied in "the medium is the message," taken literally.

The Warblington Experiment in Closed-Circuit Television, 1962-1965. Final Report, Hampshire County Education Office, Winchester (England); Southern Television, Ltd. (England), October 1965, EDRS Price MF 50c, HC $6.20, 122p, ED 024 261.

A three year study investigated the possible applications of closed-circuit television in secondary schools. The study included investigations of new teaching methods and of the technical, financial, and administrative arrangements prerequisite to the use of television on a large scale.

A Decision Structure for Teaching Machines. M.I.T. PRESS Research Monograph, 14, Richard D. Smallwood, Massachusetts Inst. of Tech., 1962, Available from The M.I.T. Press, Massachusetts Institute of Technology, Cambridge, Mass. ($4.00), 128p, ED 024 262.

Adapting a teaching machine to the individual characteristics of students is considered, and general outlines of computer algorithms and decision criteria are formulated. A mathematical model based on intuitive ideas about predicting student behavior and a class of models derived from Bayesian statistics have been developed.

Inter-Institutional Communications Networks, Glen Starlin, University of Minnesota, Minneapolis, November 1966, EDRS Price MF 25c, HC $1.00, 18p, ED 024 263.

More than half the states are operating or had plans for ETV network activity with no common purpose except to extend educational and cultural offerings to students and the general public. On a regional level, various organizations are conducting studies in information processing, instructional television, and programed instruction. Television connection between educational institutions can aid the exchange of courses, faculty talent, and research facilities.

AVI Guide to New Products, Department of Audiovisual Instruction, Washington, D.C., September 1968, EDRS Price MF 25c, HC Not Available from EDRS, Available from DAVI, NEA, 1201 16th St., N.W., Washington, D.C. 20036, 48p, ED 024 264.

Replies from advertisers in *Audiovisual Instruction* and from exhibitors at the DAVI Convention were used in compiling this

annual catalog of newly released or soon to be released products for audiovisual instruction.

Instructional Television Transmission System for the Genesee Valley Area, Brown Associates, Rochester, N.Y., May 1968, EDRS Price MF 50c, HC $3.40, 66p, ED 024 265.

In the entire Genesee Valley area of New York, only two channels are available to educators. A study was therefore made of the feasibility of constructing a multi-channel system for the transmission of television and data signals to schools in the area.

Teaching Spelling to Third and Fourth Grade Pupils with the Use of Programmed Materials and Teaching Machines, Sioux Falls Public Schools, S. Dak., May 1963, EDRS Price MF 75c, HC $7.20, 142p, ED 024 266.

This 1963 study concluded that classes using teaching machines spent too much time with mechanical difficulties, that low ability groups benefited most from programed methods, and that the use of programed materials in textbook rather than teaching machine format should be investigated for elementary school use.

Computer-Based Instruction: Psychological Aspects and Systems Conception of Instruction, Lawrence M. Stolurow, Harvard Univ., Cambridge, Mass., Graduate School of Education, December 1967, Available from Clearinghouse for Federal Scientific & Technical Information, Springfield, Va., 22151 (Ad-669 287, MF 65c, HC $3.00), 30p, ED 024 267.

A computer-based instructional (CBI) system, developed following a conceptualization of the teaching-learning process, was used to conduct research relating to an idiographic model of tutorial instruction and to investigate basic variables in learning and transfer. To adapt teaching modes to individual learners, the CBI system (acronym SOCRATES) stores a learner's responses, aptitude, achievement, and personality measures in addition to minimum final proficiency level required and maximum available time.

1967-1968 WYNE FM Radio Manual, 1967-1968 Series, Curriculum Bulletin Number 1, New York City Board of Education, Bureau of Curriculum Development, Available from Board of Education of the City of New York, Publications Sales Office, 110 Livingston St., Brooklyn, N.Y. 11201 ($1.50), 244p, ED 024 268.

The manual describes the radio broadcasts in general listening, language arts, English as a second language, music, human relations, social studies, guidance, safety, science, art and foreign language. To provide background for lesson planning and to assist teachers in promoting post-broadcast classroom discussion, summaries of the topics and problems for each program are presented.

A Study of Teacher Behavior With and Without the Use of Programmed Books: Sego Lily Elementary School, Lehi, Utah, Rocky Mountain Educational Lab. Corp., Denver, EDRS Price MF 25c, HC $0.80, 14p, ED 024 269.

Effects of the introduction of programed readers on teacher behavior and attitudes and on student achievement were considered at the early primary school level.

Creating Visuals for TV: A Guide for Educators, James Spear, Department of Audiovisual Instruction, Washington, D.C., 1965, EDRS Price MF 25c, HC Not Available from EDRS, Available from DAVI, NEA, 1201 16th Street, N.W., Washington, D.C. 20036 ($1.25), 48p, ED 024 270.

The guide, planned particularly for those approaching the television medium for the first time, is designed to acquaint the reader with production techniques for effective visuals and to suggest production ideas and practices.

Guiding Students in the School AV Club; A Guide for School-Building Audiovisual Coordinators in Organizing and Training Students for Participation in the School AV Program, Philip L. Groisser and Fred Winston, Department of Audiovisual Instruction, Washington, D.C., 1962, EDRS Price MF 50c, HC Not Available from EDRS, Available from DAVI, NEA, 1201 16th Street, N.W., Washington, D.C. 20036 ($1.50), 71p, ED 024 271.

"The Failure of Educational Evaluation," Egon G. Guba, *Educational Technology*, 1969, 9, 5, May, 29-38.

There is a need for an updated, modernized technology of evaluation in order that traditionally inadequate evaluation methods may become more operational.

"A Review of Developments in Computer Assisted Instruction," John F. Feldhusen and Michael Szabo, *Educational Technology*, 1969, 9, 4, April, 32-40.

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In order to illustrate the feasibility and promise of CAI, sources of information on research and development, theoretical bases, hardware, systems, interfaces, languages, cost factors, and descriptions of CAI programs are cited and briefly discussed.

"U. S. Office of Education Support of Computer Activities," Andrew R. Molnar and Beverly Sherman, Washington, D. C., *Educational Technology*, 1969, 9, 4, April, 5-9.

Selected projects involving computer technology and its use in education as financed by the Office of Education are outlined and described.

"Research Trends in International Broadcasting," F. Gerald Kline, University of Minnesota, *Educational Broadcasting Review*, 1969, 3, 2, April, 40-44.

The effects of mass media, general audience surveys, and developments in the area of methodology in parts of the world other than the U. S. are described in this overview of international broadcasting research.

Learning From Pictures, Catharine M. Williams, Department of Audiovisual Instruction, Washington, D.C., 1968, EDRS Price MF 75c, HC Not Available from EDRS, Available from DAVI, NEA, 1201 16th Street, N.W., Washington, D.C. 20036 ($4.50), 175p, ED 024 272.

Well prepared, carefully chosen, two-dimensional visual aids are valuable in the learning process as a source of information and to stimulate student response. In the United States we live in world of pictures, and they may be obtained from many sources. A Primary Source List (PSL) indexes 148 suppliers of pictorial material and gives the addresses of the suppliers and the types and prices of materials offered.

Operation Gap-Stop; A Study of the Application of Communication Techniques in Reaching the Unreachable Poor, Harold Mendelsohn, Denver Univ., Colo., Communication Arts Center, February 1968, EDRS Price MF 25c, HC $1.50, 28p, ED 024 274.

A project of the Communication Arts Center explored using television to communicate with the urban poor about problems in their everyday lives.

Selected Sources. Information About Educational Technology, National Education Association, Washington, D.C. Div. of Educational Technology, 1968, EDRS Price MF 25c, HC Not Available from EDRS, Available from DAVI, NEA, 1201 16th Street, N.W., Washington, D.C. 20036 (Single copy free), 9p, ED 024 275.

This list gives names and addresses for manufacturers of films, filmstrips, slides, transparencies, records and prerecorded tape, maps, globes, charts, and production equipment and materials.

Annotated Bibliography on Television in Education. Information About Educational Technology, National Education Association, Washington, D.C. Div. of Educational Technology, 1968, EDRS Price MF 25c, HC Not Available from EDRS, available from DAVI, NEA, 1201 16th Street, N.W., Washington, D.C. 20036 (Single copy free), 12p, ED 024 276.

This annotated bibliography lists publications in the categories of educational television in general, research, administration and facilities, program design and classroom utilization, program planning and production, international ETV publications, and children and television.

Quantitative Standards for School Media Programs, Personnel, Equipment and Materials for Elementary and Secondary Schools, Department of Audiovisual Instruction, Washington, D.C.,

June 1968, EDRS Price MF 25c, HC Not Available from EDRS, Available from DAVI, NEA, 1201 16th Street, N.W., Washington, D.C. 20036 ($.50), 13p, ED 024 277.

Standards must be revised to bring them in line with current educational goals and to direct school library and audiovisual programs. The standards presented here have been prepared by a joint Committee of the American Association of School Librarians and the Department of Audiovisual Instruction of the NEA in cooperation with an advisory board consisting of representatives from 30 professional and civic associations.

Instructional Media: A Procedure for the Design of Multi-Media Instruction, A Critical Review of Research, and Suggestions for Future Research, Leslie J. Briggs and others, American Inst. for Research in Behavioral Sciences, Pittsburgh, Pa., 1967, Available from librarian, American Institutes for Research, 135 North Bellefield Ave., Pittsburgh, Pa. 15213 ($4.50), 183p, ED 024 278.

Based on the theses that all media have usefulness, that effectiveness is greatest when media selection is grounded on a systematic analysis of instructional objectives, and that educational specialists have a rightful function in the selection, packaging, and utilization of instructional sequences in all media, an analytical procedure was developed to match media with educational objectives.

Special Education for the Gifted Through Television: Syllabus 1968-69. A Compendium of Information About a Special Educational Television Program Organized and Developed for Potential of Gifted Students in Grades 5-6-7, Mary M. Pilch, Ed., Educational Research and Development Council of Northeast Minnesota, Duluth, September 1968, EDRS Price MF 50c, HC $4.40, 86p, ED 024 279.

Television can provide opportunities for creative thinking or training in the utilization of mental processes other than assimilation, storage, and recall.

Criteria Relating to Educational Media Programs in Colleges and Universities. With Evaluation Check List, W.R.Fulton, Department of Audiovisual Instruction, Washington, D.C., 1966, EDRS Price MF 25c, HC Not Available from EDRS. Available from DAVI, NEA, 1201 16th Street N.W., Washington, D.C. 20036 ($.50), 23p, ED 024 280.

Criteria for use as guidelines in evaluating educational media programs were developed from two primary sources, the literature dealing with educational media programs and papers discussing model media programs written by 12 outstanding educational media specialists.

Instructional Materials for Teaching Audiovisual Courses: An Annotated List of Motion Pictures, Kinescopes, Filmstrips, Slidesets, Recordings, Tapes, and Prints, Carolyn Shockey, Ed., Syracuse Univ., N.Y. Center for Instructional Communications, 1968, Available from Syracuse University Film Rental Library, 1455 E. Colvin St., Syracuse, N.Y. 13210 ($2.00 plus postage), 166p, ED 024 282.

The listings should be of value to the college instructor in the area of instructional materials, as well as to the practicing audiovisual specialist or librarian in his in-service program.

The Use of Candid Camera Films to Illustrate Psychological Concepts in Introductory Psychology, James B. Maas, Paper presented at Annual Meeting of American Psychological Association (San Francisco, Calif., September 31, 1968), EDRS Price MF 25c, HC $.50, 8p, ED 024 283.

A one semester course for graduate students provided for the development of sophisticated educational materials to supplement teacher presentations.

Television News Program 1968 Report, Pittsburgh Public Schools, Pa., 1968, EDRS Price MF 25c, HC $1.75, 33p, ED 024 284.

The Pittsburgh Public Schools' television news program, "News 67-68," Teaches fifth and sixth grade students about the significance of national and local news events.

Educational TV and Audiovisual Teacher Training Program for Title I Board of Education Teachers of Disadvantaged Pupils in the Non-public Schools, James Morrison, Center for Urban Education, New York, N.Y., October 1967, EDRS Price MF 25c, HC $2.30, 44p, ED 024 285.

A project was designed to insure effective utilization of audiovisual resources provided to schools through ESEA Title I and Title II monies.

A Comparison of Several Feedback Methods for Correcting Errors by Computer-Assisted Instruction, David Alan Gilman, Paper presented at American Psychological Assn. Meeting (San Francisco, Calif., August 30, 1968), August 1968, EDRS Price MF 25c, HC $2.30, 19p, ED 024 287.

Data indicate that for correcting error, providing a student with a statement of which response was correct or why the correct response was correct may be the most valuable. Analysis of variance on posttest scores indicated that a combination of modes is slightly superior to some of the individual feedback modes in affecting immediate retention.

Audio-Visual Aids and Language Teaching, Walter Jansen, Ed., International Audio-Visual Technical Centre, Antwerp (Belgium), Public Utility Establishment, 1967, Available from International Audio-Visual Technical Centre, Public Utility Establishment, Morinierestraat 236, Antwerp, Belgium (Belgian frs. 420 [$8.40]), 207 p, ED 024 288.

Work documents from an international language teaching colloquy (Antwerp, April 1963) were collected for this book. Written in English, Dutch, French and German, the papers deal with the evolution of linguistic science and audiovisual methods of teaching language skills.

A Handbook for Programmers of Automated Instruction, William H. Melching and Others, Army Air Defense, Fort Bliss, Tex. Human Research Unit, September 1963, Available from Clearinghouse for Federal Scientific & Technical Information, Springfield, Va. 22151 as AD-632 558, MF 65c, HC $3.00, 197p, ED 025 144.

Programers and training supervisors are provided with procedural guidelines for the derivation of learning objectives and for the use of linear and branching programing strategies.

Education and the New Technology; Symposium Convened by the Canadian Council for Research in Education (Ottawa, November 22-24, 1967), Canadian Council for Research in Education, Ottawa (Ontario), November 1967, EDRS Price MF 75c, HC $5.95, 177p, ED 025 145.

The report includes resumes of the papers, which cover communication theory and application, use and development of new instructional materials, administration of educational facilities, current practices in Canadian schools, and the involvement of educational research, industry, and government.

Workshops on the Use and Adaptation of New Media for Developing Creativity; National Schools Project Final Report, Frank E. Williams, Office of Education (DHEW), Washington, D.C. Bureau of Research, April 1968, EDRS Price MF $1.00, HC $12.90, 256p, ED 025 146.

Structured by a three-dimensional learning theory model, an experimental teacher education project was designed to develop creativity in elementary school children. The interaction of standard curriculum and 23 project-oriented teaching strategies produced the components of productive-divergent thinking: fluency, flexibility, elaboration, originality, curiosity, risktaking, and complexity.

Live Radio Networking for Educational Stations: NAEB Seminar (University of Wisconsin, July 17-21, 1960), Betty McKenzie, Ed., and others, National Association of Educational Broadcasters, Washington, D.C., 1960, EDRS Price MF 50c, HC $5.80, 114p, ED 025 147.

A seminar reviewed the development of regional live educational networking and the prospect of a national network to broadcast programs of educational, cultural, and informational interest.

The movie career of the clearinghouse's Len Schwarz continues, as can be seen above. Len is to the left of the sled, in a scene demonstrating the potential of future on-line information retrieval systems. Now Available will continue to give Len all the space he deserves.

U.S.O.E. Establishes Bureau of Education Technology

(The following is reprinted, with permission, from the August 1969 issue of the Newsletter of the Educational Media Council.)

A new Bureau of Library and Education Technology is a major feature of a sweeping reorganization of the U.S. Office of Education announced by Assistant Secretary/Commissioner James E. Allen Jr. at a press conference late in August.

In commenting on the new bureau, Allen said "We will point this up and give more help in this area." A number of existing units presently located in other bureaus will be the basic components of the new Library and Educational Technology Bureau, and Allen said that in time there would be some reorganization of these units.

In noting increased organizational emphasis on educational media, he significantly mentioned the Report of the Commission on Instructional Technology, which has been received in Allen's office and submitted to Secretary of Health, Education and Welfare Finch. That report will be released soon, it was indicated.

A Syllabus for the Research Program in Education Through Vision, Laura N. Young and Bartlett H. Hayes Jr., Eds., Council for Public Schools, Inc., Boston, 1967, Available from Council for Public Schools, Boston, Mass., 180p, ED 025 148.

Visual experiences have an immediacy and directness which can cause an intellectual awakening, clarify an abstract concept, or demonstrate an obscure relationship. Thirty experiments using photographic and art materials are outlined in some detail as to method, material, ways to experiment, and suggested discussion questions.

Programed Instruction. the Sixty-Sixth Yearbook of the National Society for the Study of Education. Part II, Phil C. Lange, Ed., National Society for the Study of Education, Chicago, Ill., 1967, Available from the University of Chicago Press, 11030 South Langley Ave., Chicago, Ill. 60637 ($5.00), 459p, ED 025 149.

The historical basis of programed instruction is traced from the Socratic method and a grounding in behavioral analysis. The process of instructional programing, a discussion on behavioral analysis and sequencing, and the uses of empirical testing in all development phases are presented.

The Effects of Different Methods of Practice on Film-Directed Performances. Final Report, Margaret Anne Patricia Montgomery and Jean Marie Weakland, Indiana Univ., Bloomington, December 1967, EDRS Price MF 50c, HC $3.90, 76p, ED 025 150.

The effects of various rates of presentation were studied in combination with massed and spaced, concurrent and nonconcurrent, overt and covert practice modes on film-mediated perceptual performance.

The Hidden Medium: A Status Report on Educational Radio in the United States, Land (Herman W.) Associates, Inc., New York, N.Y., April 1967, EDRS Price MF $1, HC $11.60, 230p, ED 025 151.

Educational radio's greatest potential service to schools, professional people, commercial stations, the socially disadvantaged, and the community in general has been severely limited by low budgets, small staffs, and a lack of both audience research and program promotion.

Responsibilities, Rights, and Incentives for Faculty with Respect to Televised Instruction, Charles McIntyre, Paper prepared for The Feasibility Study of Inter-Institutional Television, University of Minnesota, Minneapolis, October 1966, EDRS Price MF 25c, HC $1.25, 23p, ED 025 152.

There are few available guidelines to assist those concerned with televised instruction in universities on such matters as ownership of material, control of content, and incentives to faculty. Questions of ownership of recorded material should be resolved, and institutions should be prepared to trade off some of their rights as inducements to faculty to make better use of the medium.

The Status of Instructional Television; A Study of Instructional Television for Elementary and Secondary Schools During the First Semester of the School Year 1963-1964, with Supplementary Tables, National Instructional Television Library, New York, N.Y., March 1964, EDRS Price MF 25c, HC $2.45, 47p, ED 025 153.

Information for a tabular study of instructional television (ITV) series was supplied via questionnaire by 81 educational television stations, the Midwest Program on Airborne Television Instruction, 41 closed-circuit installations, and 51 commercial channels.

Dramatic Applications of Educational Technology in Corrections, John M. McKee, Paper presented at Annual Conference on Correctional Education (16th, Carbondale, Ill., June 5-7, 1967), EDRS Price MF 25c, HC $0.45, 7p, ED 025 154.

Public offenders have special educational needs due to past histories of school failure, dropout, poverty, lack of home support, and an acquired aversion to formal education. Prison education programs, however, tend to follow traditional patterns of instruction.

An Experimental Design for Comparing the Effects of Instructional Media Programing Procedures: Subjective Vs Objective Revision Procedures. Final Report, Marvin J. Rosen, American Inst. for Research in Behavioral Sciences, Palo Alto, Calif., May 1968, EDRS Price MF 59c, HC $4.60, 90p, ED 025 156.

An experiment was designed to compare two alternative procedures for revising a preliminary version of an instructional program, one based on a subjective analysis of the program's behavioral goals, the other on an objective analysis of test data obtained from a trial of the unrevised program. The scores produced by the revised programs occurred in the expected order of magnitude, with the original program proving least effective, the subjective revisions more effective, and the objective revisions most effective.

Studies in Televised Instruction; Individualizing Group Instruction. 4, A Summary Report, George L. Gropper and Gerard C. Kress, Jr., American Inst. for Research in Behavioral Sciences, Pittsburgh, Pa.; Metropolitan Pittsburgh Educational TV Station, Pa., November 1964, EDRS Price MF 25c, HC $1.20, 22p, ED 025 157.

Programed instruction may be more efficient and effective when an individualized, fixed pace is chosen for the student.

Percentile Ranking of Educational Communications Programs, New York State Dept., Albany. Div., of Educational Communications, 1968, EDRS Price MF 75c, HC $8.25, 163p, ED 025 158.

Audiovisual directors representing 70% of the New York State public school population completed a questionnaire on the status and anticipated growth of their educational communications programs.

Research, Principles, and Practices in Visual Communication, John Ball and Francis C. Brynes, Eds., National Association of State Universities and Land Grant Colleges, Washington, D.C., 1960, EDRS Price MF 75c, HC Not Available from EDRS, Available from DAVI, NEA, 1201 16th Street, N.W., Washington, D.C. 20036 ($4.00), 168p, ED 025 159.

The development, structure, and function of visual perception are sketched, with reference to the part that individual differences, motivation, and set play in visual communication. Several specific theories of perception are presented in a condensed form.

Educational Television. The Library of Education, George N. Gordon, Center for Applied Research in Education, Inc., 1968, Available from The Center For Applied Research in Education, 701 Fifth Ave., New York, N.Y. 10011 ($3.95), 127p, ED 025 160.

Educational television represents the most comprehensive innovation in American education. Its history, financial bases, public service aspects, and the future of open-circuit instructional television are presented briefly.

Audiovisual Instruction. The Library of Education, Robert E. De Kieffer, Center for Applied Research in Education, Inc., 1968, Available from The Center for Applied Research in Education, 701 Fifth Ave., New York, N.Y. 10011 ($3.95), 127p, ED 025 161.

Audiovisual instruction has become a necessary part of good teaching. This monograph separates the experiences and devices of audiovisual materials into three categories: nonprojected, projected, and audio materials and equipment. The design of schools for the use of such materials, the importance of audiovisual research, and

the administration of the school audiovisual program are also discussed.

"Overt Responses, Knowledge of Results and Learning," M. Sime and G. Boyce, University of Sheffield, *Programmed Learning and Educational Technology*, 1969, 6, 1, p. 12-19.

This experiment attempted to determine why a "Question, Student Response, Provided Answer" technique is superior to giving a student the same information in statement form.

A One Month Special Offer: Computer Searching for YOU

Readers interested in pursuing particular educational information with an on-line computer system are invited to get in touch with Michelle Timbie of the clearinghouse staff. Some openings exist in the service schedule during the next month, but advance appointments are necessary. The telephone number is 415–321-2300, extension 3345.

The retrieval system is DIALOG, developed by Dr. Roger K. Summit of Lockheed Missiles and Space Company. Readers not geographically close to Palo Alto, Calif., and not planning to travel during October, can continue to mail in requests for assistance. When appropriate, the DIALOG system will be used to answer those.

Staff News, and Keep Those Cards and Letters Coming—

Don Coombs has moved from Associate Director to Co-Director of the Clearinghouse. William Paisley is the other one. Joint directorships can be confusing, so if you want to send a letter of complaint or praise, just remember: Coombs is in charge of publications, user services, and complaint letters. Paisley is in charge of document processing, information retrieval, and thank-you letters.

Marguerite Fischer has taken a year's leave of absence to establish a library at the new College of the Potomac in Virginia.

Henry Ingle, long in a tie for the title of Stanford ERIC's Most Eligible Bachelor, has married Miss Yolanda Rodriguez of El Paso, Texas. The new Mrs. Ingle has taken a teaching position in the Ravenswood School District.

There have been a number of additions to the staff. Gabriel Oni-Opaku is now editor of research abstracts. Jacqueline Caselli is librarian, and Carolyn Collins is helping manage the office.

—W.J.P.

Inside This Issue: USOE Establishes New Bureau of Education Technology and Marshall McLuhan's Personal Anxieties Are Related to the Message

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Price and Pages—Whenever possible, the price of the document in microfiche (MF) and hardcopy (HC) is given, along with its length.

The Shift From Color to Form Preference in Young Children of Different Ethnic Backgrounds, Part of the Final Report, Charles Mac Spellmann, Texas Univ., Austin, 1968, EDRS price MF 50c, HC $4.70, 92p, ED 025 321.

Young children prefer to match in terms of color rather than form, and between the ages of 4 and 7 years they shift to a preference for form. A current explanation posits that the shift is an adaptive response by the young child to classroom stimuli, which stresses attention to form.

In this experiment, children enrolled in Head Start programs showed a steady increase in form responses across the school year, while the non-Head Start children did not. Negro school children shifted from color to form more slowly than did Anglo and Indian school children.

The Effects of Various Rates of Presentation in Combination with Massed and Spaced, Concurrent and Non-Concurrent Practice Modes on Film-Mediated Perceptual Motor Performance, Margaret A. Montgomery, Ph.D. dissertation, Indiana University, 1967, 183p, Available from University Microfilms, 300 N. Zeeb Rd., Ann Arbor, Mich., MF $3.00, HC $8.40, as document 68-7221 (Montgomery).

Three basic films were prepared which differed only in the rate at which they were photographed and subsequently presented—normal speed and two slower motion speeds. The task was tying and testing an unfamiliar knotted figure. Two other variables were manipulated: level of massed-spaced practice, and concurrent and non-concurrent practice modes. Slower presentation rates were significantly more effective, but no significant difference was found between massed and spaced practice modes. Some evidence suggested the superiority of concurrent practice—practicing while watching the film, rather than later.

Analysis and Evaluation of Present and Future Multi-Media Needs in Higher Education. Final Report. Christopher L. Faegre and others, American Institutes for Research, Silver Spring, Md., 1968, EDRS price MF $1, HC $11.80, 234p, ED 024 351.

The strategy used to construct the Field Instrument for Evaluation of Learning Devices (FIELD) is described. FIELD is a data

Educational, Instructional TV—An Identity Crisis

By Henry C. Alter
National Educational Television

"The question is," said Alice, "whether you can make words mean so many different things."

"The question is," said Humpty Dumpty, "which is to be master—that's all."

—Through the Looking Glass

In 1968 a major professional journal ran an article, "The Failure of Educational Television." Written by the head of a university-based center for educational technology, it was inferentially endorsed in a lengthy editorial. In a later issue a sharply critical reply followed, written by one of the pioneers of educational broadcasting. This was rebutted still later by the first author in a further, full-length piece. Together, the exchange consumed close to 10,000 words.

Ironically, none of the pieces attempted to define "educational television," and as one read on it became clear that these writers, each involved with one aspect, failed to see the medium as a whole. The nature of the forest had eluded the tree experts.

This lack of clarity is endemic to the world of noncommercial television. It pervades the literature, the national conferences, even the testimony before congressional committees. Millions of viewers have a better grasp than the experts who are rarely viewers themselves, except of the product for which they are personally responsible.

To be sure, the nomenclature is fairly bewildering. The noun, *television,* is modified by too many adjectives: commercial, educational, instructional, noncommercial, public—these alone are enough to try men's souls. But then there is public service, broadcast, closed-circuit, cable, free, and (almost) pay TV as well, to say nothing of educational programming on commercial TV, a facet which assumed some fleeting importance in the exchange of articles mentioned earlier. The thesis of the lead-off article had been, in part, that "educational television" was failing for lack of know-how, and why not let commercial TV do the job?

To answer this question it is useful to construct the overview which was missing in that earlier exchange as it is in much of the other rhetoric on the subject.

The United States is the only country where "public television" was an afterthought. Conversely, it is only here that "commercial television"

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Alter Cont.—

has the upper hand. Many countries now have commercial TV, and many do not. Everywhere but here, however, "public television" came first, i.e. *public* funds made television possible initially, and the *public* interest, as seen in each country, outweighs other considerations. Invariably, this means that information, education, culture, and other national needs are in the mainstream of programming. (In totalitarian countries, the mix includes government propaganda as well.)

Conversely, U.S. television started out with nary a thought given to the medium's potential for public enlightenment, and in some quarters the notion that selling detergents amidst pratfalls is somehow more patriotic than promoting literacy (in the widest sense) persists to this day. Nevertheless, a start was made toward the more balanced use of TV in 1952, when the FCC "reserved" 242 television channels for "educational" use.

Reserving channels for educational use, however, was hardly a comprehensive or even very generous measure. It was rather like telling a man prostrated by thirst that he could find water by walking ten miles farther. The word "public" was also many miles down the road as community groups and school systems began the struggle to activate, and program, the "educational" stations with wholly inadequate funds, know-how, and talent. Nevertheless, the movement grew from one station to over fifty in ten years and is topping 180 today, 17 years later.

A funny thing happened, however, along the way. What caught the imagination, talent, and dollars was not the "televised education" which likely motivated the earliest pioneers—that part of the enterprise which could at least count on the financial support of school systems. Rather, it was that mix of public affairs and public culture which had formed the backbone of foreign TV all along, while being grossly neglected by the ratings-conscious commercial TV industry in the U.S. Gradually, "educational television" came to mean documentaries, plays (especially by young authors), discussion of issues, and children's programs for home viewing.

Of course, television continued to be beamed into classrooms as well. This, however, failed to make the giant leaps which its supporters had every right to expect. Mired down in too many conflicts of local autonomy, class hours, tedium and timidity, "instructional" TV, as it came to be called, clearly was the poor relative of "educational" TV by 1966, when President Johnson initiated a survey of the field by the blue-ribbon "Carnegie Commission."

That Commission's report, issued early in 1967, did two things. It coined the term "Public Television" to encompass stations and programs for the home viewer that would fill the gaps left by the commercial services, and, feeling that "instructional" TV had yet to make a convincing case for itself, it ordered a further study of that branch of the medium. For "public" TV, the Commission outlined a bold design of financing through a dedicated tax which would, for the first time, provide support at really viable levels, assuming that the tax could be enacted into law.

Congress lost little time in addressing itself to the Commission's challenge, and before the end of 1967 it had done exactly half of what the report called for. It passed the "Public Broadcasting Act of 1967," deferring any decision on long-range financing. It did provide sufficient federal funds to get the machinery under way and to allow some programming support as well. Also ordered, and funded, was the study of instructional television suggested in the Carnegie report.

Coincidentally, a survey completed at about that time pointed out that 55% of all broadcasting by the public television stations was for the general audience while 45% was instructional, school-related programming.

This, approximately, was the state of affairs at the time the first of the above-mentioned articles proclaimed the "failure" of "educational" television. The failure, one discovered, was that of instructional television, but the article valiantly strove to suggest that that was all there was. The 55% share of programs for the general public was ignored.

This decisive misreading of the *gestalt* was compounded through the suggestion that commercial TV should take over where the other had failed. Suppose one were inclined to debate seriously with the author—what is it that he wishes commercial TV to replace? The 45% of the programs that he knows about? The 55% that he doesn't acknowledge? The entire 180-station network? We likely will never know, for the next article took issue mainly with the suggestion that commercial TV re-enter the instructional field, citing ample evidence that this notion was hardly a promising one, and the rebuttal was an effort to restate and salvage the original suggestion.

It may be asked why one should dwell at such length on an unproductive debate. One reason is that a thing can be legitimately described in terms of what it is *not*, and that public television must plead, with Andre Gide, not to be understood too quickly.

Another reason is that this failure to grasp the true dimensions of the public television issue is a dramatic reminder of what is at stake. At issue is not educational technology, not simply ways to deal with the shortage of classrooms or qualified teachers—for educational technology is on the march, and it does not depend primarily, or even substantially, on broadcasting. Closed circuit, multi-channel systems, cable TV, cassettes, EVR, all these and others constitute its arsenal. At issue is whether television, rightly called the greatest unifying force yet developed by mankind, is to build in this nation a "public sector" to balance its private sector—whether it is to provide all that it can provide, or only a part.

This is no longer a matter of either/or. Public Television exists by virtue of federal law. It is viewed by about ten million persons each week. Its network of stations is comparable in numbers to the smaller of the three commercial giants. It is capable of reaching 87% of all TV homes. Its better programs, by a broad consensus of critical and public opinion, rank with the best that television can offer. It has demonstrated, against impossible odds, that it can provide the balance between that which commercial TV is doing superbly and that which it cannot, and will not, do.

The right of the people to see serious, sustained coverage of public issues without fear or favor, to see a wide range of creative expression, to see programs that engage the minds of the young, all of it free from the pressures of the market place—that right was the cornerstone of television in all the Western nations but ours. Added later were the legitimate, even desirable dimensions of competitive, commercial components. We started from the opposite extreme, but are now moving mightily toward redressing the balance. A strong system of public television, its identity crisis hopefully a thing of the past, can raise the quality of life in this nation. It must do no less.

30 • • •

collection instrument which can produce useful information concerning the cost, utilization, pattern, and overall effectiveness of presently operating or proposed multi-media systems in higher education.

"Relative Effectiveness of Programmed Text and Teaching Machine as a Function of Measured Interests," D.D. Cahoon, Lars P. Peterson and Charles G. Watson. Auburn University, *Journal of Applied Psychology*, 1968, *52*, 6–Pt. 1, p. 454-456.

Whether the effectiveness of programed material varies with Kuder interest pattern was investigated. Two groups of undergraduates, one with high mechanical and low literary interest and one with low mechanical and high literary interest, served as subjects. While no interest pattern or mode of presentation main effects were uncovered, there was a significant Interests X Mode interaction with one of the two instructional programs tested.

"The Effect of Tangible Reinforcement on the Learning and Retention of Programmed Material in Academically Retarded Children," Vaughn E. Stimbert, James R. Frazier, Harold R. Keller and F. J. King, Memphis State University, *Journal of School Psychology*, 1968, *6*, 4, p. 246-249.

The effect of three reinforcement conditions (knowledge of results, knowledge of results plus candy on a continuous schedule, and knowledge of results plus candy on a partial schedule) on learning and retention of simple nouns was investigated. With 48 Negro second-graders, the addition of the candy did not improve learning and, in the case of the partial schedule, actually produced worse performance.

The Effects of Prompting in Programed Instruction as a Function of Motivation and Instruction. Gerald W. Faust, Ph.D. dissertation, University of Illinois, 1967, 94p, Available from University Microfilms, 300 N. Zeeb Rd., Ann Arbor, Mich., MF $3, HC $4.80, as document 68-8066 (Faust).

Two experiments investigated permitting correct response based on inadequate inspection, using versions of a programmed course in Russian. One version contained Underline Prompts, to permit students to respond correctly without attending to the whole frame. Motivation and time pressure were manipulated, and the value of the attentional control afforded by the No-Underline programs was accentuated when motivation was low, time pressure high. The second experiment indicated the significant increase in recall with No-Underline programs could not be attributed to difference in training time.

Alter, Cont.—

The articles and reports referred to at left, in the order in which they were mentioned:

Ofiesh, G. D., The Failure of Educational Television, *Educational/Instructional Broadcasting*, June/July, 1968.

Skornia, H. J., Recalling the Lessons of History, *Educational/Instructional Broadcasting*, November/December 1968.

Ofiesh, G. D., ETV Revisited, *Educational/Intructional Broadcasting*, March, 1969.

The Carnegie Commission Report, Bantam, 1967.

One Week of ETV, National Instructional Television Center, 1969.

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Black History Kit

Schools and community groups seeking materials for Black History emphasis programs will be interested in a new multimedia production of NEA's Center for Human Relations. Consisting of a 22 minute black and white filmstrip, a 33 1/3 rpm record with narration and music, a 36 page illustrated booklet which amplifies the material covered, (and which is available in additional quantity at 50c per booklet), and a huge 11 foot long display consisting of three 18" x 45" panels, the multi-media production is called *"Historical Highlights in the Education of Black Americans."*

It reviews major developments in education for Black Americans, reveals attitudes toward the education of Blacks which have changed with the passage of time, and traces nationwide trends in Black Education. Priced at $10, *"Historical Highlights"* is available from National Education Association, Publications-Sales Section, 1201 Sixteenth St., N. W., Washington, D. C. 20036.–J. O.

* * *

As of the end of July, the FCC reports that there were 101 UHF ETV stations on the air, and 77 VHF ETV stations. In addition, there are four ETV stations on non-reserved channels in both the UHF and VHF commercial TV listings.

"The Effectiveness of Visual Illustrations Used to Complement Programed Instruction," Francis M. Dwyer, Jr., *Journal of Psychology*, 1968, 70, 2, 157-162.

Measured immediate and delayed achievement of one hundred forty-one ninth grade subjects who received varied visual treatments containing differing amounts of realistic detail. In comparing the effectiveness of the programed treatments alone, the types of visuals which promoted learning differed on the immediate and delayed retention tests.

"Learner-Centered Instruction (LCI): II. Job Behavioral Description for AFSC 322x1R," William J. Pieper, John D. Folley, Jr., and Horace H. Valverde, *USAF AMRL Technical Report*, 1968, 68-51, 32 pages.

Describes the approach taken in the development of a job-behavioral description for the learner-centered instruction (LCI), Weapon Control Systems Mechanic/Technician, Air Force Specialty Code 322x1R course.

"Effect of Varying Amount of Realistic Detail in Visual Illustrations Designed to Complement Programmed Instruction," Francis M. Dwyer, Jr., *Perceptual and Motor Skills*, 1968, 27, 2, 351-354.

Eight types of visual illustrations were evaluated in terms of their ability to improve student achievement of five criterial measures. Results indicate that some types of visuals are more effective than others in facilitating subject achievement of specific educational objectives, and that the addition of color in specific types of illustrations is an important instructional variable.

"Advance Organizers and Test Anxiety in Programed Social Studies Instruction," Frank L. Ryan, *California Journal of Educational Research*, 1968, 19, 2, 67-76.

Attempted to determine the effects of advance organizers, test anxiety, and their interaction on the performance of fourth graders. It was found that "(a) although advance organizers can increase achievement, time required in working programed materials is not thereby reduced, (b) nigh test anxiety students take longer to work programed materials than low test anxiety students, but there is no significant difference in achievement between the two groups, and (c) there is no significant interaction between advance organizers and anxiety levels in terms of either achievement or of time required to complete programed materials.

"A Study of Recall and Retention of Accelerated Lecture Presentation," Arreed F. Barabasz, *Journal of Communication*, 1968, 18, 3, 283-287.

Two lectures were recorded; the first was presented to a

control group of students at normal word speed (twenty-one minute duration); the second was presented to an experimental group at an increased duration (fourteen minutes), and a nontreatment group was not exposed to the lecture. Retention tests were administered immediately after presentation and two-three weeks later. No significant differences were found between the control and experimental groups. It appears that lecture presentation, at least by one professor at State University College, Buffalo, N.Y., can be increased in word rate by a third without any loss in retention.

" 'Good-bye, Teacher . . . '," Fred S. Keller, *Journal of Applied Behavior Analysis*, 1968, 1, 79-89.

Describes a new method of teaching in which subjects work at their own pace with a teaching staff or proctors, assistants, and an instructor. The major procedures for this method are (1) the subjects' advancing according to their ability, (2) a unit-perfection requirement, (3) motivation by the use of lectures and demonstrations, (4) stress upon written expression, and (5) the use of proctors.

"Adult Training: The Use of Programmed Instruction," J. C. Neale, M. H. Toye, and E. Belbin, *Occupational Psychology*, 1968, 42, 1, 23-31.

Young and old trainees were provided factual information by programed instruction. Results were favorable only for the young adults.

Dial Access Information Retrieval Systems: Guidelines Handbook for Educators. Final Report, Gabriel D. Ofiesh, Catholic Univ. of America, Washington, D.C., July 1968, EDRS Price MF 75c, HC $8.95, 177p, ED 025 682.

Guidelines for the planning, purchase, and utilization of dial access information systems for educational instruction were studied and incorporated into a handbook for educators.

The Creation and Development of Educational Television as an Institution of Adult Education: A Case Study in American History, Robert Andrew Carlson, Wisconsin Univ., Madison, 1968, Available from University Microfilms, 300 Zeeb Rd., Ann Arbor, Michigan 48106 (Order No. 68-7092, MF $7.15, Xerography $25.45), Document Not Available from EDRS, 562p, ED 025 705.

This historical study analyzes the national development of educational television (ETV) within the context of American political, social, economic, and intellectual life of the 1950's and 1960's.

Games and Simulation, Clark C. Abt, April 1967, EDRS Price MF 25c, HC 70c, 12p, ED 025 842.

In designing games one must (1) define overall objectives and scope; (2) identify the key actors, their objectives, and constraints; (3) determine an interaction sequence and decision rules; (4) identify the win criteria; and (5) choose the form of presentation. Compromises must be made between simplification and realism, concentration and comprehensiveness, ar d melodrama and analysis. The attempt to include too much in one game must be avoided.

An Education System Planning Game, Clark C. Abt, 1965, EDRS Price MF 25c, HC 80c, 14p, ED 025 843.

Although games are not usually thought of as aids to planning, a special type of game can be helpful when problems are complex, factors determining resolution are imperfectly understood, and numerous views coexist. Objectives of the education system planning game are to illuminate major issues of educational planning, to increase the participants' awareness of the costs and benefits of alternative plans, and to stimulate an exchange of ideas concerning diverse approaches to education.

Study of Man-Machine Communications Systems for the Handicapped. Interim Report, Haig Kafafian, Cybernetics Research Inst., Inc., Washington, D.C., August 19, 1968, EDRS Price MF 75c, HC $7.55, 149p, ED 025 890.

Newly developed communications systems for exceptional children are described, including a keyless keyboard, a telephonic communication system for deaf and speech impaired persons, a fiber optic oundle remote visual display, and an interface for the blind, fingerless, and others with limited control.

Selection and Specification of Rear-Projection Screens, Petro Vlahos, February 1961, Available from Journal of the Society of Motion Picture & Television Engineers, 9 East 41st Street, New York, New York 10017; Journal Cit–Journal of the Society of Motion Picture and Television Engineers, v70 n2 p89-95 February 1961, Document Not Available from EDRS, ED 025 934.

The characteristics of the rear-projection screen are examined in detail, and procedure is given by which an optimum screen may be specified for a specific application.

The Sound of Pictures, Elton Hocking, National Federation of Modern Language Teachers Association, March 1968, EDRS Price MF 25c, HC 40c, 6p, ED 025 969.

A foreign language and culture program is advocated in place of the traditional language and literature program in today's schools.

CARLOS: Computer-Assisted Instruction in Spanish at Dartmouth College, Ronald C. Turner, Dartmouth Coll., Hanover, N.H., 1968, EDRS Price MF 25c, HC $2.00, 38p, ED 025 972.

The computer-assisted instruction project in review Spanish, Computer-Assisted Review Lessons on Syntax (CARLOS), initiated at Dartmouth College in 1967-68, is described here.

Results of the Survey of the Use of Programmed Foreign Language Instruction in American Universities and Colleges. Clearinghouse Report, Janet D. Griffith, Center for Applied Linguistics, Washington, D.C. Clearinghouse for Self-Instructional Language Materials, July 1965, EDRS Price MF 25c, HC $1.10, 20p, ED 025 989.

A two-phase survey was conducted by the Center for Applied Linguistics Clearinghouse for Self-Instructional Language Materials to (1) identify modern language departments of U.S. colleges and universities using programed materials, and (2) describe the extent of the departments' use and development of such materials.

"Computer-Directed Instructional Games," William McKay, *Audiovisual Instruction*, 1969, 14, 4, April, 37-40.

The new technology of computer instruction is employed in a game-like learning experience in which the student interacts with the computer terminal to solve extensive problems presented as a changing dramatic situation. Thorough description and diagrams are

TV and Trivia and the Heisenberg Principle

. . . My concern here is not to bemoan the triumph of 12-year old programming in the industry. . . . It is to register agreement with at least a portion of the lament of the "silent majority." It is to suggest a kind of "Heisenberg Principle" which applies to the mass media in general and to the masses of media, television, in particular.

The Heisenberg Principle, in atomic physics . . . proposes that on the small particle level, processes cannot be observed because the intrusion of any instrumentality of observation (protons, electrons) so interferes with the phenomenon being observed as to fundamentally change the process itself; that such intrusion raises the system to a new energy level or degrades it to a more chaotic one. The television camera, whose energy derives from its connection to perhaps 200 million television sets, represents such an intrusion into a process. No event, from a grand tour of the President to your Aunt Minnie's ice cream social, can take place as it *would* have in the absence of the snouted red-eyed intruder, with the camera going.

Not only does the presence of the camera put the participants in the process "on stage" in their own consciousness, but even its hidden presence creates, once the film or direct-feed hits the home screen, an importance for the event registered which raises it to a new energy level; TV coverage *makes* the event, by virtue of its having been covered, super-real–larger than life by hundreds of percent.

Ordinary people become as gods, ninety-feet tall, potent, overwhelming. And there *is no cure!* Whatever it turns its attention to, the intruder transforms to godlikeness in power and significance. Be they protesting students or the "silent majority" who will be featured in CBS's December Special *A Day in the Life of the United States of America*, those on screen will be gods out of the machine.

Television *cannot* present the trivial. By *being presented* even trivia becomes of enormous importance.

32 —Jay Chidsey, in Mass Media in Adult Education Newsletter

used to illustrate this report of an experiment using a "simulated environment" with sixth-graders and problems and future procedures are discussed.

"Cabinets in Crisis," Richard H. Lee, *Audiovisual Instruction*, 1969, 14, 4, April, 49-52.

This report and evaluation of a five-part classroom-television broadcast which experimented with the technique of simulation gaming covers the preparation of the series and suggests ideas for future productions of this type.

"Toward a Profession: Certification," Sidney C. Eboch, *Audiovisual Instruction*, 1969, 14, 4, April, 72-74.

In order to attain and maintain professional status in the audiovisual field, there is the necessity of organizing procedures to require certification to practice. The political-legal framework needs to work with the professional framework to organize desirable standards and goals at local, state, and national levels with suitable methods of enforcement.

"Minority Group Employment in Educational Broadcasting," NAEB Office of Research and Development, *Educational Broadcasting Review*, 1969, 3, 2, April, 15-18.

In the first survey to determine the distribution of minority personnel among selected job categories in educational radio and television stations, the greatest concentration was found to be in the technician group with talent and clerical positions second and third. Also noted were minority group employment patterns as reflected by population distribution and geographical region.

"Predicting ITV Growth," J. Christopher Reid, *Educational Broadcasting Review*, 1969, 3, 2, April, 34-39.

The method of least squares is an accurate method of depicting past growth and predicting future growth of ITV operations. This simple statistical technique of orthogonal polynomials is illustrated by means of two studies, one measuring the growth of the number of institutions offering television courses and the other measuring the growth of the number of television courses being offered in various disciplines.

"Computers as Substitute Counselors," John W. Loughary and Murray Tondow, *Educational Technologyy*, 1969, 9, 3, March, 33-36.

Given present technology, it is realistic that a computer could be programmed to function as a substitute counselor with capabilities of listening to the client–providing dialogue and behavior reinforcement–with characteristics of privacy and objectivity.

"Comparisons Between Traditional and Programmed Learning as a Function of Passive Performance and Active Application and Time Till Application," Anatol Pikas, *Programmed Learning Educational Technology* (Engl.), 1969, 6, 1, January, 20-25.

Traditional and programmed learning methods are compared, emphasizing two variables: (1) passive knowledge vs. active application and (2) earlier vs. later presentation of testing. The method of the study is outlined, followed with extensive tables and a discussion of the results.

"Report on an Auto-Instructional Course in Mathematics," B. Banks, *Programmed Learning Educational Technology* (Engl.), 1969, 6, 1, January, 31-39.

Students were permitted to choose their own path and rate of progress through a selected section of a mathematics course. Noted results were increased student industry and interest, improved student-teacher relationship, and effective teacher control.

"ITV: Move Up or Move Out!" Jack E. Gill, *Educational Screen and Audiovisual Guide*, 1969, 48, 5, May, 10-11.

The instructional systems approach attempts to shift the educational center of gravity from teacher to learner by stating specifically what is expected of the learner in the course, developing effective evaluation instruments to measure his progress, designing a wide range of teaching aids and strategies, and evaluating and improving the course. Because of its electronic flexibility, ITV can be instrumental in fulfilling the goals of this approach through presentation of inquiry materials, testing, presentation of demonstrations, etc.

"The Systems Approach to Education: Mystique and Reality," Launor F. Carter, *Educational Technology*, 1969, 9, 4, April, 22-31.

Systems analysis is defined and discussed and a list of procedures and methods to be followed in approaching educational problems is presented. After describing the development of two different training programs (training system for air defense and teaching introductory reading to Mexican-American children), an assessment of the value of the systems approach is made.

"Some Interactions of Speech Rate, Signal Distortion, and Certain Linguistic Factors in Listening Comprehension," Thomas G. Sticht, *AV Communication Review*, 1969, 17, 2, Summer, 159-171.

Two experiments were designed to measure the relative effects of speech rate and signal distortion, as well as linguistic factors, on listening comprehension. Results indicated that comprehension is generally limited more by speech rate than by signal distortion; thus, the primary problem is in the human receiver, not the mechanical equipment.

"Film Movement and Affective Response and the Effect on Learning and Attitude Formation," William C. Miller, *AV Communication Review*, 1969, 17, 2, Summer, 172-181.

This study used the galvanic skin response technique in measuring emotional response to film movement and its effect on information recall and attitude formation. The conclusion is that motion may be used aesthetically in film to produce an emotional response, but this response is mediated by other response-producing factors, such as content.

"Group Use of Programed Instruction as a Means of Generating Homogeneous Study Groups," Robert Crist, *AV Communication Review*, 1969, 12, 2, Summer, 201-209.

The results of this study indicate that homogeneous groups of students can be identified through the group use of programed materials. A detailed report of method and results of the study is followed by a discussion.

"Programmed Instruction in Other Countries," Gabriel M. Della-Piana, *NSPI Journal*, 1969, 8, 1, January, 11-15.

This first article in a series reviews activities in programmed learning in Scotland, Britain, Germany, and Italy. A list of selected papers presented at the April 1968 National Conference on Programmed Learning and Educational Technology is included.

"The Supermarket Discovery Center–Programming in Process," Robert T. Filep, *NSPI Journal*, 8, 4, April, 6-10, 22-23.

This project, held in a supermarket where both parents and children might be found simultaneously, attempted to train preschoolers in cognitive and tactile discovery tasks and provided guidance for the parents in reinforcing the concepts taught. Subjects

Computer-Based Study Units Offered on Trial Basis

Sample computer-based resource units are offered to teachers of special education by the Regional Special Educational Instructional Materials Center (RSEIMC) at the State University College at Buffalo, New York.

Thirty-one different study units, such as "The Solar System and Beyond," "Smoking," "News Media and Analysis" and "Sex Education," have been completed. After informing RSEIMC which unit seems appropriate, the teacher will receive a list of 75 to 200 possible objectives. Choosing not more than 10 for the entire class, and not more than 4 for any one child, the teacher returns the list along with information on each child's sex, age, reading level, handicapping conditions, and other learner-variables.

As the RSEIMC announcement put it, "Within 48 hours we will return a *Resource Guide* tailored by the computer for your class. Part A will include suggestions for the total class, and Part B will consist of suggestions for Chuck, Alice, Don and all the other children in your group."

Only eight of the units are especially adapted for special education situations; other teachers might inquire about the possibility of receiving sample computer-based resource units. The address is RSEIMC, O.G. 200, State University College at Buffalo, 1300 Elmwood ave., Buffalo, N. Y.

were primarily Negro with five percent Mexican-Americans, and tutors were junior college students.

"Is CAI Cost-Effective? The Right Question at the Wrong Time," Robert J. Seidel, *Educational Technology*, 1969, 9, 5, May, 21-23.

Our traditional framework of education must be completely renovated and revolutionized to take full advantage of the new era of technological innovations in education.

"Computers in Education: Interesting, But How Relevant?" Charles L. Blaschke, *Educational Technology*, 1969, 9, 5, May, 24-28.

In order to improve the effectiveness of computer technology in education, it is necessary to create groups to manage the politics of education, as well as to redefine educational objectives and to improve school management.

"Videotape Recording in Teacher Education," James A. Johnson, Nevin R. Frantz, Jr., and James V. Schultz, *Educational Technology*, 1969, 9, 5, May, 48-53.

Micro-teaching, classroom observation, and simulation are included for discussion as representative applications of videotape recording in education.

"Ten Years of Educational Technology," Andrew R. Molnar, *Educational Broadcasting Review*, 1969, 3, 3, June, 52-59.

A review of a decade of educational technology research under Title VII of the National Defense Education act considers cost factors, quality of curricula, innovation, and potential.

Psychological Research in Adult Learning, Philip H. DuBois, Ed., Washington Univ., St. Louis, Mc. Dept. of Psychology, 1968, Available from Clearinghouse for Federal Scientific and Technical Information, Springfield, Virginia 22151 (AD-672-748, MF 65c, HC $3.00), 71p, ED 026 576.

The report includes a number of papers centered around educational technology which were presented at a conference at the Bromwoods Residential Center of Washington University. Topics were the systems approach to learning, computer assisted instruction, the role of simulation in training, programed instruction, educational technology in technical training, the learning of operational equipment as a criterion in training research, and the evaluation of a partially self-paced course.

Creative Procedures for Adult Groups; Improving Teaching in the Church, Harold D. Minor, Ed., 1968, Available from Abingdon Press, 201 Eighth Ave., S., Nashville, Tennessee 37202, Document Not Available from EDRS, 174p, ED 026 583.

This guide to creative procedures for improving teaching adult church groups deals with using attitude scales, checklists, photographs, tape recordings, folk music, and other audiovisual aids and techniques.

The Effectiveness of Two Different Uses of an Autoinstructional Program to Teach the Use of the Air Force Fiscal Account Structure and Codes, Billy Earl Askins, North Texas State Univ., Denton, 1967, Available from University Microfilms, 300 N. Zeeb Road, Ann Arbor, Michigan 48106 (Order No. 67-15,013, MF $3.00, Xerography $9.00), Document Not Available from EDRS, 198p, ED 026 601.

The problem of the study was the effectiveness of three teaching techniques—lecture-demonstration supplemented with the programed textbook, autoinstructional procedure using only the programed textbook, and the conventional lecture-demonstration procedure. Students taught solely with the autoinstructional procedure required signficantly less time to complete the unit than students taught with the other two techniques.

Proceedings of the Naval Training Device Center and Industry Conference (2nd; November 28-30, 1967), Naval Training Device Center, Orlando, Fla., November 1967, Available from Clearinghouse for Federal Scientific and Technical Information, Springfield, Virginia 22151 (AD-672-567, MF 65c, HC $3.00), Document Not Available from EDRS, 360p, ED 026 609.

This report consists of 40 conference papers presented on the technical problems confronting organizations having a prime interest in simulation for training, and stresses the cooperation of the military educator and the technical community to achieve a product that satisfies the training mission, is cost effective, and is training time effective.

An Experimental Study Designed to Test the Relative Effectiveness of a Multi-Media Instructional System, Elaine Scheier, 1969, EDRS Price MF 25c, HC 50c, 8p, ED 026 611.

A study compared the effectiveness of Learning 100 (L-100), a multimedia, multimodal, multilevel communication skills system, with that of a more conventional reading program with functional illiterates in Bedford-Stuyvesant, a ghetto area in Brooklyn, New York.

Computers and Chinese Linguistics, Frank A. Kierman and Elizabeth Barber, Princeton Univ., N.J. Chinese Linguistics Project, 1969, Available from the Chinese Linguistics Project, Green Hall Annex, Princeton Univ., Princeton, N.J. 08540 ($1.50 for handling), Document Not Available from EDRS, 45p, ED 026 643.

This survey of the field of Chinese language computational linguistics was prepared as a background study for the Chinese Linguistics Project at Princeton.

Closed-Circuit Television—A Tool for Guidance, Wilmington Public Schools, Del., 1968, EDRS Price MF 25c, HC 80c, 18p, ED 026 663.

The major contribution television can make to the counselor's efforts is to instruct and monitor the large-group testing and information giving functions. This frees the counselor for more individual and personal contacts.

Bimodal Educational Inputs to Educable Mentally Retarded Children. Final Report, Jacques H. Robinson and others, American Institutes for Research (Washington Office), Silver Spring, Md. Communication Research Program, September 1966, EDRS Price MF 75c, HC $7.45, 147p, ED 026 751.

The usefulness of paced auditory presentation combined with simultaneous visual presentation of lesson material was examined as a technique of improving reading skills in the educable mentally handicapped.

Designing Instructional Facilities for Teaching the Deaf: The Learning Module; Symposium on Research and Utilization of the Educational Media for Teaching the Deaf (4th, Lincoln, Nebraska, February 5-7, 1968), Midwest Regional Media Center for the Deaf, Lincoln, Nebr.; Nebraska Univ., Lincoln. Dept. of Educational Administration, 1968, EDRS Price MF $1.00, HC $3.15, 261p, ED 026 792.

Eleven conference papers treat designing learning modules, or complete instructional facilities, for the deaf.

Electronic Classroom, Harry A. Price, Middletown City School District, N.Y., 1966, EDRS Price MF 25c, HC 75c, 13p, ED 026 840.

This describes the conversion of a limited-use, "white elephant" auditorium into an electronic classroom to be used as a flexible instructional space with numerous potentials for enrichment of learning via utilization of electromechanical aids.

Comic Cassettes for Language Classes, Gerald Fleming, January 1968, EDRS Price MF 25c, HC 25c, 3p, ED 026 891.

The development of animated cartoon sequences showing various kinds of mime and gesture in humorous situations is recommended as a useful teaching aid in language learning. Humor as a

New TV Net in Indiana

A computer-controlled statewide switched television network which enables Indiana's four state universities and the medical center in Indianapolis to share educational resources among themselves and their regional campuses as well as with hospitals, private colleges and educational television stations throughout the state was scheduled to begin operations September 1.

The television network is one component of a complex of multi-media networks which together will make up the Indiana Higher Education Telecommunications System. Total cost of the system for the 1969-70 biennium is estimated at $1,760,000, including leased telephone wires and computer time.

The network can be used to transmit lectures, special events, experiments and demonstrations from the main campuses and medical center to regional campuses and hospitals, for in-service training programs, for continuing education, and for statewide meetings or organizations. Means are being sought to extend the network to private colleges and ETV stations in the state.—J. O.

Satellite TV in India

A just-signed agreement between the Indian Space Research Organization and America's NASA will permit India to jump several stages of development of televised adult instruction for village inhabitants. Avoiding costly ground transmitter and associated relay stations for wide signal coverage, the cooperative project will blanket a large part of India with telecasts directly from antennae on a synchronous satellite. Some 5,000 villages will be reached by the satellite.

It is hoped that the experiment will prove the value and practicality of direct space broadcasting in practical instruction to rural inhabitants. The agreement follows several years of experiment in conventional TV transmission to villages in the New Delhi area, focusing on agricultural education. Comparisons between TV-served and not-served villagers have demonstrated the effectiveness of television of a concrete character, and moved India to experiment with satellite transmission.—J. O.

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significant element in the content of pictorial aids is stressed, and the appropriate types of humor are identified and illustrated.

Programmed Language Instruction—Help for the Linguistically "Underprivileged," Theodore H. Mueller, National Federation of Modern Language Teachers Association, February 1968, EDRS Price MF 25c, HC 40c, 6p, ED 026 902.

A study of a first-year French course using programed instruction at the University of Kentucky is described.

A DDC Bibliography on Microfiche, Microfilm and Related Equipment, Volume 1, Defense Documentation Center for Scientific and Technical Information, Alexandria, Va., July 1968, Available from Clearinghouse for Federal Scientific and Technical Information, Springfield, Va. 22151 (AD 675 300, MF 65c, HC $3.00), Document Not Available from EDRS, 64p, ED 026 087.

This bibliography contains abstracts of 40 unclassified-unlimited reports on microfiche, microfilm and related equipment acquired by the Defense Documentation Center since 1953.

Listening. What Research Says to the Teacher, No. 29, Stanford E. Taylor, American Educational Research Association, Washington, D.C.; National Education Association, Washington, D.C. Dept. of Classroom Teachers, April 1964, Available from National Education Association, 1201 Sixteenth Street, N.W., Washington, D.C. 20036 (25c), EDRS Price MF 25c, HC Not Available from EDRS, 36p, ED 026 120.

A practical teaching program is suggested to improve children's listening ability through development of specific skills, such as paying attention, following directions, and listening to language sounds. It is suggested that improved listening will promote improvement in the other communication skills.

Acquisition and Transfer Differences between Kindergarteners and Second-Graders on Aurally and Visually Presented Paired-Associates Using an A-B, A-C Design Research Project Number 2 of Project Head Start Research and Evaluation Center, Syracuse University Research Institute, Final Report, November 1, 1967, Vernon C. Hall, Syracuse Univ., N.Y. Research Inst., November 1, 1967, EDRS Price MF 25c, HC 70c, 12p, ED 026 139.

Results showed that children reached criterion significantly faster in the visual presentation groups. It was also found that the younger children showed less negative transfer in the AB-AC design than the older children.

Programmed Mathematics, Dora High School, New Mexico Western States Small Schools Project, Santa Fe, November 1965, EDRS Price MF 25c, HC 45c, 7p, ED 026 184.

Because of small class enrollment, limited class offerings, and differences in ability range, a programmed algebra course was introduced to eliminate some disadvantages of a small school mathematics program.

Programmed English, Des Moines High School, New Mexico Western States Small Schools Project, Santa Fe, November 1965, EDRS Price MF 25c, HC 65c, 11p, ED 026 186.

Programmed English instruction in small schools was designed to provide a wider spectrum of curricular experiences to enhance the somewhat narrow offerings of the regular English curriculum. The specific course outline and evaluation of the programmed English instruction at Des Moines High School indicate that the project in this New Mexico small school was feasible and successful.

Individually Prescribed Instruction—Reading Program, John O. Bolvin, April 1968, EDRS Price MF 25c, HC 90c, 16p, ED 026 202.

A program of individually prescribed reading instruction is described. Data collection, record keeping, and the use of information by teachers are essential aspects of this program. Computer assisted management for this project was to be in operation by September 1968.

How Effective is Programmed Instruction in Teaching of Reading?, Edward Fry, April 27, 1968, EDRS Price MF 25c, HC $1.60, 30p, ED 026 219.

The history and general principles of programed instruction are surveyed. Research literature published on the topic is cited and the declining frequency of articles appearing on the subject is noted. Some reasons for the growing use of programed instruction in industry are discussed.

A Comparison of Interest Level and Problem Solving Accuracy Generated by Single Concept Inductive and Deductive Science Films, Research Study Number 1, Willard Francis Reese, Colorado State College, Greeley, 1966, Available from University Microfilms, 300 North Zeeb Road, Ann Arbor, Michigan 48106 (Order No. 67-1128, Microfilm $3.00, Xerography $7.80), Document Not Available from EDRS, 169p, ED 026 250.

Compared were inductive and deductive sequencing of stimulus material to produce two single concept films. Girls did significantly better with the deductive method, whereas boys did significantly better with the inductive method.

A Comparative Study of the Effectiveness of a Multi-Media Systems Approach to Harvard Project Physics with Traditional Approaches to Harvard Project Physics, Lawrence Eugene Poorman, Indiana Univ., Bloomington, 1967, Available from University Microfilms, 300 North Zeeb Road, Ann Arbor, Michigan 48106 (Order No. 68-4745, Microfilm $3.00, Xerography $8.80), Document Not Available from EDRS, 194p, ED 026 258.

Investigated were the effects of a carefully sequenced program of integrated media on achievement and affective responses of students in a multi-media systems approach to Harvard Project Physics.

An Experimental Study of the Effects of Different Combinations of Television Presentations and Classroom Teacher Follow-up on the Achievement and Interest in Science of Fifth Graders, Ray Skinner, Jr., Ohio Univ., Athens, September 1968, Available from University Microfilms, 300 North Zeeb Road, Ann Arbor, Michigan 48106 (Order No. 67-9429, Microfilm $3.00, Xerography $8.20), Document Not Available from EDRS, 178p, ED 026 265.

Four combinations of two types of television lessons and two methods of classroom teacher follow-up were studied in order to identify how combinations of treatment affected pupil achievement and interest in science and how television instruction motivated learning in elementary schools. Pupils who were presented with unanswered questions designed to arouse curiosity and interest in science regardless of type of teacher follow-up, achieved significantly higher results on tests than pupils who viewed the same substantive material, presented in a direct expository manner giving explanations of phenomena.

Professional Teacher Education II; A Programed Design Developed by the AACTE Teacher Education and Media Project, American Association of Colleges for Teacher Education, Washington, D.C., 1968, Available from Amer. Assn. of Coll. for Teacher Educ., 1201 16th Street, N.W., Washington, D.C. 20036 ($1.50), EDRS Price MF 50c, HC Not Available from EDRS, 99p, ED 026 294.

The American Association of Colleges for Teacher Education (AACTE) Media Project was developed to determine whether (1) the gap between the producer and the user of educational innovations could be bridged; (2) a meaningful way to present the results of educational research to the user could be designed; and (3) the integrated and functional use of media in instruction could be demonstrated effectively.

Appendix J. An Experimental Model to Enable Instructional Managers to Demonstrate Interaction Competency, Leon Rousseau and Others, Northwest Regional Educational Lab., Portland, Oregon, October 1968, EDRS Price MF 25c, HC $1.40, 26p, ED 026 315.

The interaction tasks (or communication process) model, an experimental model to enable instructional managers (in this case education students undergoing microteaching) to demonstrate competence in their interactions with students, is predicated upon four sequential component subsystems: (1) selection, (2) planning, (3) criterion task, and (4) remediation.

Individualization of Instruction for Teacher Corpsmen, Evan R. Sorber, Temple Univ., Philadelphia, Pa., 1968, EDRS Price MF 25c, HC $1.05, 19p, ED 026 341.

This preparation of the Temple-Philadelphia-Trenton Teacher Corps Program describes the use of the resources which are available to most colleges, universities, school systems, and communities to achieve the goals of technology in education—individualization and humanization.

The Effects of Prompting, Practice and Feedback in Programmed Videotape, Rita B. Johnson, January 1968, Journal Cit—AREA Journal; v5 n1 p73-79 January 1968 (American Educational Research Assn., Washington, D.C.), Document Not Available from EDRS, ED 026 342.

An experiment was designed to test the hypothesis that a program of prompting, practice, and feedback would improve the beginning teacher's ability to observe pupil performance in the classroom.

Some Effects of Televised Instruction on a Basic Speech Course, Robert S. Goyer and Earl R. Harlan, September 1967, EDRS Price MF 25c, HC 40c, 6p, ED 026 380.

This study proposed to examine the effectiveness of television instruction as compared with three other methods of instruction. Although certain limitations might have influenced the results, it is concluded that there is no reason to condemn television as an inferior method of instruction.

Film Study Hang Ups, Charles F. Grenier, January 1969, EDRS Price MF 25c, HC 30c, 4p, ED 026 385.

The interest and delight which students find in film should be preserved from a teacher's excessive zeal to analyze and explain. As the beauty of poetry is frequently diminished through exhaustive analyses of similes, rhyme schemes, and other technical devices, the value of film to high school students can be weakened through too great an emphasis on "film appreciation, movie comprehension, image recognition, visual-media technology," and other standard but dull teaching devices.

Some Broader Hints on Establishing a Language Laboratory, George J. Edberg, Pennsylvania State Modern Language Association, April 1965, EDRS Price MF 25c, HC 25c, 3p, ED 026 909.

A general survey of U. S. schools and universities in 1965 suggests that 50 percent of them do not feature proper language laboratory facilities. Aimed at prospective laboratory buyers and those seeking equipment replacements, the article analyzes the laboratory's mechanical aspects, accessible locations, physical facilities and equipment arrangement, uses of audiovisual aids, program planning, and decision making, all in terms of users' needs.

Your Language Laboratory Facilities Present and Future, Jean R. Theuma, Hawaii Univ., Honolulu, October 15, 1968, EDRS Price MF 25c, HC $2.05, 39p, ED 026 916.

Rationale and facilities of the University of Hawaii's language laboratories are examined. The two-fold summary defines present (Fall 1968) and future (Fall 1969) needs, physical facilities, expected language enrollments, schedules, staff, services, research, experimentation, and planning. Also treated is the financial aspect of laboratory operation.

Experiment in French Language Instruction, 1958-1959, Antioch Coll., Yellow Springs, Ohio, November 1959, EDRS Price MF 25c, HC $1.40, 26p, ED 026 921.

An evaluation of the first year of Antioch College's experimental French I course features the use of student assistants, the development of acetate audiovisual aids, and organization of class time.

Manual of Tape Scripts: French, Level 1, Gladys Lipton and others, New York City Board of Eduation, Brooklyn, N.Y. Bureau of Curriculum Development, January 1968, Available from Board of Education of the City of New York, Publications Sales Office, 110 Livingston St., Brooklyn, N.Y. 11201 ($2.00), EDRS Price MF 50c, HC Not Available from EDRS, 115p, ED 026 922.

Designed specifically for use in the oral phase of first-level French classes in New York City Public Schools, these scripts may be used as supplemental drill or review material in any beginning conversational French course with or without the accompanying audio tapes.

Audio-Visual Techniques in Teaching Foreign Languages, Theodore Huebener, 1960, Available from New York University Press, 62 Fifth Ave., New York, N.Y. 10011 ($4.95), Document Not Available from EDRS, 174p, ED 026 931.

A textbook of audiovisual materials describes the use of items for classroom display, the blackboard, and flat materials (flash cards, projectionable materials, films). There are separate chapters on the audial materials and techniques (phonograph and radio), tape recorders, television, and the foreign language laboratory. An extensive appendix list recommends audiovisual materials and their sources.

Project for Application of Mathematical Learning Theory to Second-Language Acquisition, With Particular Reference to Russian. Final Report, Joseph A. Van Campen, Stanford Univ., California Community Coll. Planning Center, August 1968, EDRS Price MF 75c, HC $9.90, 196p, ED 026 934.

A Stanford University project in which mathematical learning theory was applied to the learning of Russian in a first-year, computer-based college course is examined in this report.

Research and Studies About the Use of Television and Film in Foreign Language Instruction: A Bibliography With Abstracts, Dolly D. Svobodny, Comp., Modern Language Association, New York, N.Y. ERIC Clearinghouse on the Teaching of Foreign Languages, January 1969, EDRS Price MF 25c, HC $1.95, 37p, ED 026 936.

A compilation of 90 abstracts describes research and experimental teaching using television and film methods in foreign language instruction. The studies cover (1) a comparison of televised instruction with face-to-face presentation, (2) a comparison of filmed or kinescoped courses with direct instruction, (3) other uses of television and film application for instruction, (4) the significance of student and teacher attitudes, and (5) the effects of production variables in television and films.

A Test of the Use of a Program of Instruction in Basic Mathematics Requiring Only Minimal Reading Skills for Use as a Remedial Tool for College Freshmen. Final Report, A. Harvey Block, Morgan State Coll., Baltimore, Md. Inst. for Research in Behavioral Technology, October 1968, EDRS Price MF 25c, HC $1.90, 36p, ED 026 969.

At Morgan State College, a non-verbal program of instruction for remedial mathematics was developed which requires limited reading skills and allows students to progress at their own pace.

Films on TV Production

What promises to be a valuable training tool for those planning to utilize television as an education mechanism is the set of "CETO Television Training Films," which the Great Plains National Instructional Television Library has just acquired from CETO, the Centre for Educational Television Overseas in London. The 15 films, running from 13 to 28 minutes in length, deal "concisely yet meaningfully with such television production areas as graphics, audio, lighting, the use of camera lenses, set construction, make-up, basic camera shots, camera editing and presentation techniques."

The announcement quotes one educational user as reporting that "... Using these excellent films as a springboard to discussion and practical exercises, we succeeded in having our educators speak the language of television and produce programs by the end of a four-day institute."

For further information on purchase or lease of the series or single films, contact Great Plains National Instructional Television Library, University of Nebraska, Lincoln, Neb. 68508.—J. O.

Elementary School Instructional Resources Center, September 6, 1966–June 16, 1967. Program Evaluation Conducted by Department of Psychological Services and Educational Research in Conjunction with Department of Instructional Resources, Milwaukee Public Schools, Wis. Div. of Curriculum and Instruction, 1968, EDRS Price MF 25c, HC $1.80, 34p, ED 027 048.

The Elementary Library Project was undertaken in order to establish and expand fifteen school libraries in areas of high concentration of low income families. The objectives of the project were to increase pupil use of the library, to increase teacher use of library materials, and to improve student work-study skills.

How Does the Secondary School Library Become an Instructional Materials Center? Personnel, Program, Materials, Housing, Margaret Rogers, Oregon School Study Council, Eugene, June 1968, EDRS Price MF 25c, HC 75c, 13p, ED 027 049.

Objectives of this paper are: (1) to provide a practical point of view, based on experience of library and audiovisual practitioners, for expanding secondary school library programs into instructional materials center programs as demanded by instructional programs involving flexible scheduling, inquiry, and independent study; (2) to provide an annotated bibliography of pertinent comment and illustrations from school administration, architecture, library, and audiovisual journals, books, and media; and (3) to make available to school administrators and planners selected sources on these topics.

A DDC Bibliography on On-Line Computer Systems, Volume I, Defense Documentation Center for Scientific and Technical Information, Alexandria, Va., September 1968, Available from Clearinghouse for Federal Scientific and Technical Information, Springfield, Va. 22151 (AD 675 050, MF 65c, HC $3.00), Document Not Available from EDRS, 208p, ED 027 056.

This bibliography lists 162 unclassified unlimited reports acquired by DDC, with their abstracts, grouped into five general subject areas: programing (computers), information retrieval, time sharing, graphics, and general applications.

Research on the New Nursery School. Part I, A Summary of the Evaluation of the Experimental Program for Deprived Children at the New Nursery School Using Some Experimental Measures. Interim Report, Glen Nimnicht and others, Colorado State College, Greeley, December 1967, EDRS Price MF 25c, HC $2.40, 46p, ED 027 076.

The New Nursery School (NNS) program was set up to help 3- and 4-year-old, Spanish-surnamed, environmentally deprived children. The school is organized as an autotelic responsive environment which the children attend for 3 hours a day.

Learning to Recognize Words and Letters on a CAI Terminal, Donald Ross Green and others, April 25, 1968, EDRS Price MF 25c, HC 90c, 16p, ED 027 177.

An IBM 1050 AV computer system, including a typewriter keyboard, tape recorder, and slides, was used to teach 4-year-olds word and letter recognition.

National Center for School and College Television News Supplement Number 6, Television in Science Education, National Center for School and Coll. Television, Bloomington, Ind., 1967, EDRS Price MF 25c, HC 60c, 10p, ED 027 180.

This Newsletter concerns the National Center for School and College Television's Conference on television in science education. The Conference was conducted to assess television materials being offered in science in an effort to stimulate the development of increasingly effective television materials for the nation's schools.

A Study of Micro-Teaching in the Preservice Education of Science Teachers, Daniel Thaddeus Goldwaite, Ohio State Univ., Columbus, 1968, EDRS Price MF 75c, HC $7.20, 142p, ED 027 184.

The effectiveness of microteaching techniques for improving presentation of science demonstrations by prospective science teachers was investigated. It was concluded that students who were members of the micro-classes presented better demonstrations when teaching than those who taught microclasses.

Programed Laboratory Instruction for Non-Science Curricula Students in College Physics, Alvin Lee McLendon, Auburn Univ., Ala., Available from University Microfilms, 300 North Zeeb Road, Ann Arbor, Michigan 48106 (Order No. 68-13499, Microfilm $3.00, Xerography $8.80), Document Not Available from EDRS, 191p, ED 027 191.

The effectiveness of programed materials developed to present elementary college physics experiments in mechanics to non-science college majors was evaluated.

Space Science Educational Media Resources, A Guide for Junior High School Teachers, Kenneth M. McIntyre, National Aeronautics and Space Administration, Washington, D.C., June 1966, Available from National Aeronautics and Space Administration, Washington, D.C. ($3.50), EDRS Price MF 50c, HC Not Available from EDRS, 108p, ED 027 211.

This guide, developed by a panel of teacher consultants, is a correlation of educational media resources with the "North Carolina Curricular Bulletin for Eighth Grade Earth and Space Science" and the state adopted textbook, "Modern Earth Science."

Demonstration and Experimentation in Computer Training and Use in Secondary Schools, Activities and Accomplishments of the First Year, Thomas E. Kurtz, Dartmouth Coll., Hanover, N.H. Kiewit Computation Center, October 1968, EDRS Price MF 50c, HC $4.15, 81p, ED 027 225.

A major goal of the project is to produce units of curricula in which the computer can be used to enhance the teaching or learning of mathematics, the sciences, and other secondary school subjects.

Description of a Large-Scale Micro-Teaching Program, Clark Webb and others, Brigham Young Univ., Provo, Utah. Coll. of Education, 1968, EDRS Price MF 25c, HC 60c, 10p, ED 027 250.

This report describes the implementation of a large-scale program at Brigham Young University to provide for at least one microteaching experience for each of 730 students enrolled in a beginning education course.

Effects on the Verbal Teaching Behaviors of Beginning Secondary Teacher Candidates' Participation in a Program of Laboratory Teaching, O. L. Davis, Jr. and B. R. Smoot, Texas Univ., Austin, Coll. of Education, February 1969, EDRS Price MF 25c, HC 65c, 11p, ED 027 288.

One hundred and forty secondary teacher candidates who were enrolled in a first course in teaching were the subjects of a seven-week study to determine the effects of microteaching in a Teaching Laboratory (TL) on verbal behaviors. Results indicated that teaching candidates' verbal behaviors can be modified in a TL.

An Integrated Approach to the Teaching of Film and Literature, John Stuart Katz, January 1969, EDRS Price MF 25c, HC 40c, 6p, ED 027 307.

Some of the current approaches to the teaching of film include utilizing the medium as an audiovisual aid, as an attempt to inundate the student with sensations, or in a study of cinema arts and film manufacture. However, the integration of film and literature, in which students can see how each medium functions, seems most viable.

Pilot Study to Explore the Use of an Audio-Visual Tutorial Laboratory in the Secretarial Skills Area as a Means of Updating and Improving Curriculum Offerings at the Community College Level in Michigan, Ronald K. Edwards and others, Lansing Community Coll., Mich. Dept. of Accounting and Office Programs, June 1968, EDRS Price MF 25c, HC $1.85, 35p, ED 027 387.

Materials included 8mm film loops with sound tracks, slides with accompanying narration on magnetic tape, timed writings or

One Plastic Cigarette—

"Why Not Quit?," a series of twenty colorcasts on smoking moderated by E. G. Marshall and featuring former Surgeon General Dr. Luther L. Terry, which Philadelphia's WFIL-TV released in October, is being used on dozens of commercial stations across the country, and on the 48 military video outlets around the world. Interested viewers can order free copies of the Smoker's Self-Testing Kit, prepared by the National Clearinghouse on Smoking and Health.

An information kit, being prepared by Triangle Television, will include a menthol plastic smokeless cigarette—an aid in the withdrawal process. Net profits from sale of the programs are being assigned to the University of Pennsylvania for medical research. For information, contact Triangle Television, 4100 City Line Avenue, Philadelphia, Penn. 19131.—J. O.

production timings on magnetic tape, and hand-out sheets explaining any preparation necessary prior to the instruction.

An Experiment to Determine the Effectiveness of Slides and Audio-Tapes for Presenting Manipulative Demonstrations in Graphic Arts, John David Jenkins, January 1969, Available from University Microfilms, Inc., 300 North Zeeb Road, Ann Arbor, Michigan 48106, Document Not Available from EDRS, 117p, ED 027 407.

This study compared teacher demonstrations with a slide-tape methods of presenting demonstrations in graphic arts. Findings included: (1) Initial learning of terminology and procedural detail was significantly better in the teacher demonstration group, (2) There were no significant differences between groups for operational procedures, and (3) Operation performance was significantly better in the teacher demonstration group.

Broadcast TV as an Aid to Continuing Education. Terminal Progress Report, Irving R. Merrill and Ruby B. Yaryan, California Univ., San Francisco, Medical Center, June 30, 1968, EDRS Price MF 25c HC $2.20, 42p., ED 027 447.

The effect of massed versus distributed television presentations on attendance and learning in a voluntary situation were compared in a field experiment involving 114 physicians in general practice. Attendance was significantly greater under massed than under distributed viewing. The presentations produced gains in learning achievement, and there was no statistically significant difference in learning achievement between massed and distributed viewing.

An Investigation of Four Television Teaching Feedback Techniques via a Closed Circuit System, Jimmy Bryant Copeland, Wisconsin Univ., Madison, 1966, Document Not Available from EDRS, Available from University Microfilms, 300 N. Zeeb Rd., Ann Arbor, Michigan 48106 (Order No. 66-13,778, MF $3.00; Xerography $6.60), 136p.; Ph.D. Thesis, ED 027 486.

Eighty vocational agriculture students comprised four groups: group A viewed the program without any opportunity to participate in two way communications or ask questions before or after the telecast; group B viewed the program as group A but had a group leader qualified to answer questions concerning subject matter; group C viewed the program as group A and, in addition, had two-way communication with the television instructor via telephone (they had no group leader); group D viewed the program as group B and in addition to a group leader, had two-way communication with the television instructor in the studio. There was no significant overall effect due to the treatments.

The Use of Television in Adult Education; Research Evidence and Theoretical Considerations, Herbert Lorenz Zettl, California Univ., Berkeley, 1966, Document Not Available from EDRS, Available from University Microfilms, Inc., 300 N. Zeeb Rd., Ann Arbor, Michigan 48106 (Order No. 66-8428, MF $5.30, Xerography $18.70), 414p.; Ph.D. Thesis, ED 027 492.

Major findings included: (1) educational television (ETV) viewers generally have similar socioeconomic and social participation characteristics but differ in their goal and reward orientations; (2) the main factors in ETV viewing and adult education seem to be learning skills and attitude toward educational institutions and methods; (3) there is a difference in learning between voluntary, at-home ETV audiences and involuntary at-home or in-school audiences.

Wisconsin Educational Television System, Wisconsin Coordinating Council for Higher Education, Madison, March 1967, EDRS Price MF 25c HC $1.15, 21p., ED 027 730.

Following a presentation of some of the more important reasons why Wisconsin needs a statewide educational television system, principles are suggested as a basis for planning such a system.

Some Approaches to Programming for Language Laboratories with Proposals for Increasing Their Effectiveness, Raymond Jean Lamerand, Thesis presented in fulfillment of Master of Arts' degree requirements at Monash University, Clayton, Victoria, Australia, 1966, EDRS Price MF $1.50 HC $19.35, 385p., ED 027 769.

Discussed in this thesis are the linear (Skinner), intrinsic, adjunctive, mathetics, and idiomorphic approaches to language laboratory programing. The appropriateness of these different programing styles is considered along with the setting up of objectives, evaluation, and relevant linguistic theory.

Proceedings of the Annual Meeting of ACTFL: Session on Linguistics and the Language Teacher (Chicago, December 28, 1967), Bela H. Banathya, Ed., American Council on the Teaching of Foreign Languages, New York, N. Y., 1967, EDRS Price MF 25c HC $2.45, 47p., ED 027 722.

The first half of the proceedings report is a transcript of the keynote address by Victor Hanzeli, and the second portion features remarks by other discussants, including Dwight Bolinger and James McClafferty. While Mr. Hanzeli's disucssion centers on the relationship between linguistics and the language teacher, he offers background information on the history and effectiveness of the audio-lingual method.

International Directory of Audio-Visual and Programmed Foreign Language Courses and Materials. Preprints, Part 3, Institut fur Kommunikationsforschung, Berlin (Germany), Documentation Div., October 1964, EDRS Price MF $1.25 HC $15.90, 316p., ED 027 790.

A directory of over 20 foreign language courses lists classes alphabetically by student language and target language.

Foreign Language for You: A Teacher Guide for Spanish, Semesters I and II, Instructional Television for the 5th Grade, Milwaukee Public Schools, Wis. Div. of Curriculum and Instruction, 1966, EDRS Price MF 50c HC $6.25, 123p., ED 027 789.

Designed to relate to the ongoing curriculum of the Milwaukee Public Schools, these first- and second-semester teacher guides for Spanish school telecasts at the fifth grade level comprise only one part of a series developed for the use of FLES teachers in many subject areas.

Foreign Language for You: A Teacher Guide for Spanish, Semesters III and IV, Instructional Television for the Sixth Grade,

Teachers Guides To TV from NEA

We have just received the third issue of the NEA Department of Audiovidual Instruction's *Teachers Guides to Television*. The 28 page magazine lists and previews upcoming television productions, primarily new specials, which will be of interest to teachers in many subject areas. Only a small minority of the programs ("How the Grinch Stole Christmas," for example) are such as to be primarily child-oriented.

The *Guides* (why the plural is a mystery unfathomable at press time) not only alert the teacher to upcoming programs, but also offer synopses of the programs, related questions to explore, collateral bibliography, and a film list of additional audiovisual resources for classroom pre- and post-viewing.

Whereas the mainstream of audiovisual method has thus far lain in the direction of creating special materials for classroom use or transforming TV or radio productions to kinescope or audio-tape for classroom use, this project aims at the integration of the *home viewed* television program, viewed as part of a *class* assignment, into the pattern of in-class work through the use of class discussion, collateral reading, and the introduction of related films in class. It represents a different way of looking at mass media resources, a technique for building around them and using them *when they happen* (of obvious advantage in such events as the Moon landings) rather than waiting for months until the original production can be transformed into a "tame" classroom technique.

To obtain the current *Guides*, which lists productions ranging from September to February 1970, send $1 to *Teachers Guides to Television*, P. O. Box 564, Lenox Hill Station, New York, N. Y. 10021. $2 now for the two 1969-70 issues; $2 per quarter, $3 per school year new price after January 1, 1970. Orders for fewer than 10 copies, add 25c handling charge per magazine.—J. O.

20th Century Cinemacy

Cinemate is a new word coined by Twentieth Century Fox to refer to a quality called for in contemporary society, when man must be not only literate but also "cinemate." To aid in the development of cinemacy, Fox has begun to publish one-sheet critiques of films which they believe suitable for use by schools, colleges, churches, and families as discussion-starters. The critiques, written by professionals in film or group-work outside the film industry, include a cast-list, some review quotes, and suggested questions for thought and/or discussion.

So far, six guides have been produced, to *Joanna, The Prime of Miss Jean Brodie, Hard Contract, The Boys of Paul Street, Butch Cassidy and the Sundance Kid,* and *A Walk with Love and Death.* The guides are available free, for discussion group use, and you may ask to be placed on the list for future guides. Write 20th Century Fox, 444 West 56th Street, New York, N. Y. 10019, Attention Hal Sherman.–J. O.

Milwaukee Public Schools, Wis. Div of Curriculum and Instruction, 1967, EDRS Price MF 50c HC $5.55, 109p., ED 027 799.

Designed to relate to the ongoing curriculum of the Milwaukee Public Schools, these third- and fourth-semester teacher guides for Spanish school telecasts at the sixth-grade level include brief descriptions of course objectives, pupil achievement goals, learning hints, lesson content, and teaching procedures.

Experimental Tape-Recordings for Teaching Sensitivity to Musical Intonation, Final Report, Ralph Rizzolo, Arizona State Univ., Tempe, February 1969, EDRS Price MF 50c HC $4.75, 93p., ED 027 854.

The control group was exposed only to the traditional method of teaching intonation, and the experimental group listened to 17 prerecorded magnetic tapes that aurally compared intonation errors with intune protoypes. No significant differences were found between the 2 groups in their ability to recognize errors of intonation, and to identify the direction of errors that were flat and errors that were sharp.

Multi-Media Instructional Programs, Arthur M. Cohen, American Association of Junior Colleges, Washington, D. C.; California Univ., Los Angeles, ERIC Clearinghouse for Junior Coll., Information, January 1969, EDRS Price MF 25c HC 30c, 4p., ED 027 885.

Although there are many reports on the introduction of replicable media in junior college instruction, there is a lack of coordinated research on any particular form of instruction. This is a serious matter, for, without data on whether anyone has learned anything from one medium, the introduction of any other medium is necessarily based on criteria of little validity. Some observations, however, may clearly be made: (1) a lecture, even on television, is still only a lecture, not a new instructional method; (2) since programing has a powerful effect on the programer, if not on the student, it appears that teachers should write programs; (3) a multi-sensory approach is an attempt to find out what has an effect on which student at what time and suggests avenues of possibly fruitful research.

The Efficacy of Selected Stimulus Modalities in Acquisition and Retention of Sex-Typed Textual Responses of Kindergarten Children, Carl Braun, Paper presented at International Reading Assocation conference, Boston, Mass., April 24-27, 1968, April 25, 1968, EDRS Price MF 25c HC $1.20, 22p., ED 028 031.

The hypothesis that a combined pictorial and textual stimulus would result in shared and thus reduced stimulus control was investigated. Colorful content words were pictorially representable nouns selected on the basis of their being boy-words or girl-words. Four sets of criterion word cards were prepared. Two of these were used for the auditory-visual presentation and were accompanied by illustration. The two sets used for the auditory presentation had only the words on the cards. Learning and test cycles were alternated until the subject responded correctly on two successive test trials. The results based on acquisition consistently favored the auditory treatment.

A Comparative Study Concerning the Relative Effectiveness of Televised and Aural Materials in the Inservice Training of Junior High School Mathematics Teachers, Donald Raymond Byrkit, Florida State Univ., Tallahassee, 1968, Document Not Available from EDRS, Available from University Microfilms, 300 N. Zeeb Road, Ann Arbor, Michigan 48106 (Order No. 68-16357, Microfilm $3.00, Xerography $9.25), 205p., ED 028 071.

The television group showed superiority over the control group and the audiotape group in every case where significance was obtained.

Minicourse: Theory and Strategy, Philip Langer, Far West Lab. for Education Research and Development, Berkeley, Calif., February 1969, EDRS Price MF 25c HC 95c, 17p., ED 028 114.

Research in microteaching at the Far West Laboratory for Educational Research and Development resulted in a self-contained instructional package labeled the minicourse. Designed to train the teacher in a microteaching situation with self-evaluation only (providing the feedback normally assigned to a supervisor through evaluation forms), the minicourse consists of a product (containing instructional films, handbooks, and evaluation forms), employs the process of videotaped microteaching sessions, and is organized into four to six sequences of a three-day instructional plan.

A Computer-Assisted Teacher Training System, M. I. Semmel, Michigan Univ., Ann Arbor, Center for Research on Language and Language Behavior, 1968, EDRS Price MF 50c HC $3.25, 63p., ED 028 124.

This series of working papers represents early stages in the development of a versatile and economical Computer-Assisted Teacher Training System (CATTS) for special educators, a system capable of providing immediate visual feedback of data relevant to teacher-pupil interaction in a classroom setting.

Mixed Media in High School: A Case History, Kathleen Karr, December 1968, EDRS Price MF 25c HC 25c, ED 028 162.

A production of Tom Stoppard's radio play, "Albert's Bridge," by high school students in Washington, D. C., showed that stage production and film effects could be used together effectively and that high school students were competent to handle difficult productions.

The Development of Instructional Materials and Teaching Strategies on Race and Culture in American Life, Final Report–Volumes I, II First Part, II Second Part, III, John S. Gibson, Tufts Univ., Medford, Mass, Lincoln Filene System for Citizenship and Public Affairs, December 1968, EDRS Price MF $2.75 HC $34.65, ED 028 225.

Section I of this final report presents basic research findings on teaching and learning about intergroup relations at the elementary level, and includes a number of propositions and critiques about intergroup relations education and a series of recommendations. Section II is an actual "Intergroup Relations Curriculum" for elementary grades.

Experimentation With Computer-Assisted Instruction In Technical Education, Semi-Annual Progress Report, Report No. R-6, Harold E. Mitzel and others, Pennsylvania State Univ., University Park, Computer Assisted Instruction Lab., June 30, 1967, EDRS Price MF 50c HC $3.50, ED 028 245.

Six research studies involving computer assisted instruction (CAI) are reported.

The Use of Portable Video Tape Recorders and Micro-Teaching Techniques to Improve Instruction in Vocational-Technical Programs in Illinois: A Pilot Study, Final Report, Studies One and Two, Arye Perlberg and others, Illinois Univ., Urbana, Dept. of Vocational and Technical Education, EDRS Price MF 75c HC $6.75, ED 028 253.

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Instructional Technology Report Not Unveiled at NAEB Meeting

The report of the president's Commission on Instructional Technology will be out soon, some think.

Solid expectation of its release led to awkward situations at the Nov. 9-12 National Association of Educational Broadcasters convention in Washington. U. S. Commissioner of Education James Allen was on the program to reveal the main points of the report, and a day later Stirling McMurrin, who was chairman of the commission, was impaneled for questions and answers centering on the report. Each did as well as could be expected, under the extreme constraint of not feeling free to reveal the report's contents.

Allen commended the commission and then told NAEB members in attendance that "I know you have been anxiously awaiting copies of the report. I have been anxiously trying to get it released."

The report is at the White House, awaiting presidential approval. Comment in the trade press has suggested that some recommendations in the report may not be favorably received by the administration, now so extremely cost-conscious.

McMurrin registered no unhappiness with the progress the report has made through the Office of Education, the Department of HEW, and the White House.

"There is some optimism as to the report's future," he said. "It definitely has not been lost in the files of HEW. We are assuming that it will not be lost in the files of the White House. If I am informed correctly," McMurrin said, "the report has been in the White House for only a very short time. Everything that we know as to its reception there has been on the positive side."

Ohliger, Alter Brighten Up Newsletter

With this issue, *Now Available* is pleased to announce that John Ohliger of Ohio State University will be serving as a contributing editor, and that Henry Alter of National Educational Television will do a series of provocative commentaries on the media scene.

While more news and comment will be carried in future issues, the listing of documents processed and/or cited at the clearinghouse will continue.

Now Available is sent, with the compliments of the clearinghouse, to individuals interested in media and technology research. If a friend of yours would like to be on the mailing list, let us know.

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